

## **APPENDIX B**

# **AEROSPACE VEHICLE MDS FOR GUIDED MISSILES, ROCKETS. PROBES, BOOSTERS. AND SATELLITES**

### A. SYMBOLS

The following list outlines the symbols used in guided missile, **rocket**, probe, booster, and satellite MDS designations. Figure B-1 shows a sample MDS. A description of each symbol can be found in the Joint Regulation (reference (b)).

| status<br><u>Prefix</u>       | Launch<br><u>Environment</u> | <u>Mission</u>                      | Vehicle<br><u>Type</u> |
|-------------------------------|------------------------------|-------------------------------------|------------------------|
| C Captive                     | A A i r                      | C Transport                         | B Booster              |
| D Dummy                       | B Multiple                   | D Decoy                             | M Guided               |
| J Special Test<br>(Temporary) | C Coffin                     | E Electronic/<br>Communications     | Missile<br>or Drone    |
| M Maintenance                 | F Individual                 | G Surface Attack                    | N Probe                |
| N Special Test<br>(Permanent) | G Runway                     | I Aerial/Space<br>Intercept         | R Rocket               |
| X Experimental                | H Silo Stored                | L Launch Detection/<br>Surveillance | S Satellite            |
| Y Prototype                   | L Silo Launched              | M Scientific/Calibration            |                        |
| Z Planning                    | M Mobile                     | N Navigation                        |                        |
|                               | P Soft Pad                   | Q Drone                             |                        |
|                               | R Ship                       | S Space Support                     |                        |
|                               | S Space                      | T Training                          |                        |
|                               | U Underwater                 | U Underwater<br>Attack              |                        |
|                               |                              | W Weather                           |                        |

## **B. APPROVED GUIDED MISSILE, ROCKET AND PROBE DESIGNATORS**

**The** list of approved MDS designations for all guided missiles, rockets and probes of direct interest to the Department of Defense starts at page B-3. These vehicles are listed sequentially by design number and alphabetically by series.

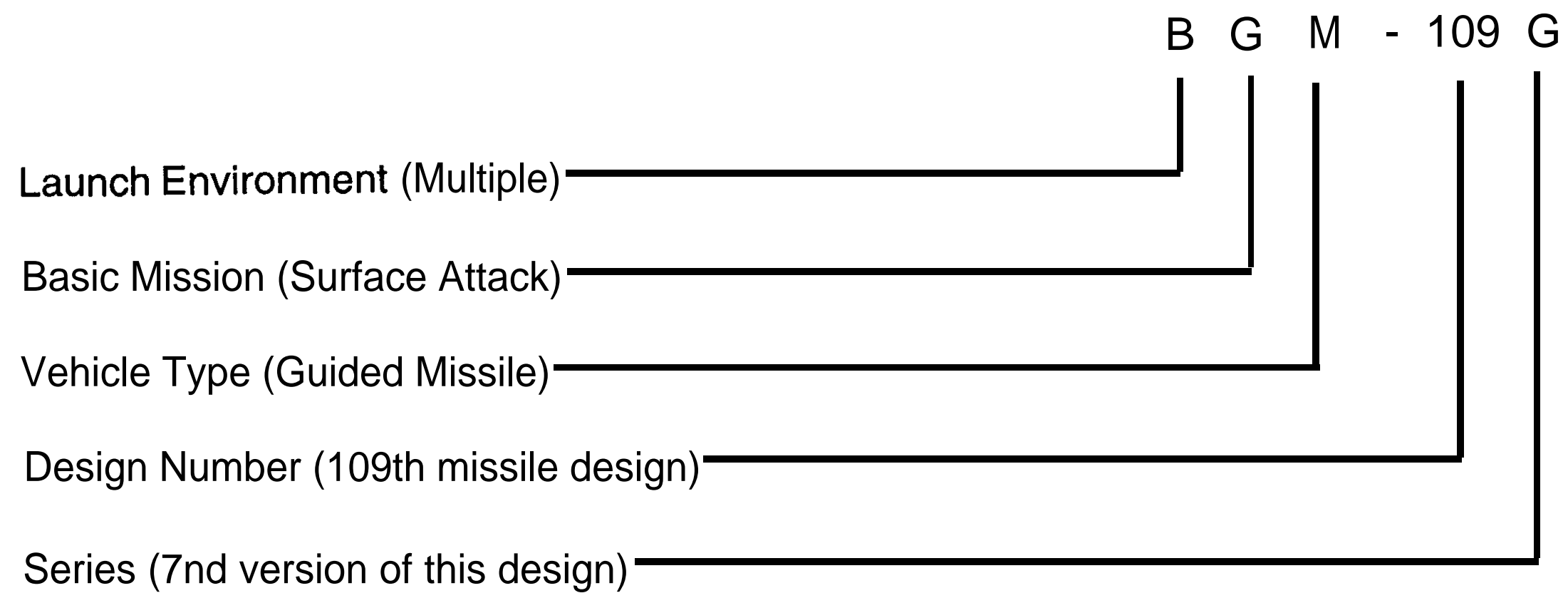


Figure B-1, Sample Missile MDS



BOOSTER SERIES

| MDS    | MANUFACTURER      | POPULAR NAME | ENGINE DATA | DEPARTMENT | DESCRIPTION  |
|--------|-------------------|--------------|-------------|------------|--|
| SB-2A  | GENERAL DYNAMICS  | ATLAS I      |             | AF         | ONE AND ONE HALF STAGE, LIQUID ROCKET WITH PAYLOAD CAPABILITIES OF APPROXIMATELY 15,000 POUNDS LEO, 11,000 POUNDS PLEO, 6,500 POUNDS GEOSYNCHRONOUS TRANSFER ORBIT (GTO), AND 3,100 POUNDS GEOSYNCHRONOUS ORBIT (GEO).         |
| SB-3A  | MCDONNELL DOUGLAS | DELTA 11     |             | AF         | FOUR STAGE, SOLID AND LIQUID ROCKET COMBINATION WITH PAYLOAD CAPABILITIES OF APPROXIMATELY 11,520 POUNDS LEO, 8,795 POUNDS PLEO, AND 4,155 POUNDS GEO.   |
| SB-4A  | MARTIN MARIETTA   | TITAN 11     |             | AF         | TWO STAGE, LIQUID ROCKET WITH PAYLOAD CAPABILITIES OF APPROXIMATELY 5,000 POUNDS LEO, AND 4,200 POUNDS PLEO.   |
| SB-5A  | HARTIN MARIETTA   | TITAN IV     |             | AF         | THREE OR FOUR STAGE, SOLID AND LIQUID ROCKET WITH PAYLOAD CAPABILITIES OF APPROXIMATELY 39,100-47,800 POUNDS LEO, 12,700 POUNDS GEO, 24,000 POUNDS GTO, AND 31,000-38,000 POUNDS PLEO, DEPENDING UPON BOOSTER AND UPPER STAGE. |
| SB-5B  | LOCKHEED MARTIN   | TITAN IV     |             | AF         | THREE OR FOUR STAGE, SOLID AND LIQUID ROCKET WITH PAYLOAD CAPABILITIES OF APPROXIMATELY 39,000-47,000 POUNDS LEO AND 5,000-12,000 GEO DEPENDING ON BOOSTER AND UPPER STAGE.  |
| SB-6A  | MARTIN MARIETTA   | TITAN 34D    |             | AF         | THREE OR FOUR STAGE, SOLID AND LIQUID ROCKET WITH PAYLOAD CAPABILITIES OF APPROXIMATELY 33,800 POUNDS LEO, AND 4,100 POUNDS GEO, DEPENDING UPON CONFIGURATION.   |
| SSB-7A | BOEING            | Inus         |             | AF         | INERTIAL UPPER STAGE CAPABLE OF APPROXIMATELY 5,300 POUNDS GEOSYNCHRONOUS ORBIT, USED WITH TITAN IV.   |
| SSB-8A | GENERAL DYNAMICS  | CENTAR       |             | AF         | UPPER STAGE CAPABLE OF APPROXIMATELY 10,200 POUNDS GEOSYNCHRONOUS ORBIT, USED WITH TITAN IV.   |

BOOSTER SERIES (CONTINUED)

| MDS     | MANUFACTURER                   | POPULAR NAME | ENGINE DATA    | DEPARTMENT | DESCRIPTION  |
|---------|--------------------------------|--------------|----------------|------------|--|
| SSB-9A  | MCDONNELL<br>DOUGLAS           | PAM D 11     |                | AF         | PAYLOAD ASSIST <b>MODULE</b> CAPABLE OF <b>APPROXIMATELY</b> 3,500 POUNDS OF GEOSYNCHRONOUS TRANSFER ORBIT' FROM DELTA OR SHUTTLE.         |
| SSB-10A | MART I N<br>MARI ETTA          | TRANSTAGE    |                | AF         | UPPER STAGE <b>(TRANSTAGE)</b> CAPABLE OF APPROXIMATELY 4,100 POUNDS GEOSYNCHRONOUS ORBIT, USED WITH TITAN 340.                            |
| ASB-11A | ORBI TAL SCI ENCES<br>HERCULES | PEGASUS      | 1 ROCKET MOTOR | AF         | AIR-LAUNCHED, THREE-STAGE, SMALL BOOSTER WITH PAYLOAD CAPABI LI TIES OF APPROXIMATELY 1,000 <b>POUNDS</b> LEO, AND 860 <b>POUNDS</b> PLEO. |





MISSILE SERIES

| MDS    | MANUFACTURER     | POPULAR NAME | ENGINE DATA    | DEPARTMENT | DESCRIPTION  |
|--------|------------------|--------------|----------------|------------|--|
| RIM-2A | GENERAL DYNAMICS | TERRIER      |                | NAVY       | SURFACE-TO-AIR WEAPON FOR SHIPBOARD USE. LAUNCHED BY SOLID FUEL ROCKET BOOSTER AND PROPELLED BY SOLID FUEL ROCKET SUSTAINER. |
| RIM-2B | GENERAL DYNAMICS | TERRIER      |                | NAVY       | IMPROVED RIM-2A.   |
| RIM-2C | GENERAL DYNAMICS | TERRIER      |                | NAVY       | IMPROVED RIM-2B.   |
| RIM-2D | GENERAL DYNAMICS | TERRIER      |                | NAVY       | IMPROVED RIM-2C.   |
| RIM-2E | GENERAL DYNAMICS | TERRIER      |                | NAVY       | IMPROVED RIM-2D.   |
| RIM-2F | GENERAL DYNAMICS | TERRIER      |                | NAVY       | IMPROVED RIM-2E.   |
| AIM-4D | HUGHES           | FALCON       | 1 M58A-2       | AF         | SUPERSONIC, AIR-TO-AIR, PASSIVE, INFRARED SEEKED, GUIDED MISSILES.   |
| AIM-4F | HUGHES           | FALCON       | 1 M46          | AF         | IMPROVED AIM-4D.   |
| AIM-4G | HUGHES           | FALCON       | 1 M46          | AF         | IMPROVED AIM-4F.   |
| AIM-7D | RAYTHEON         | SEA SPARROW  | 1 MK6 MOD 3    | NAVY       | SOLID FUEL, RAOAR HOMING, AIR-TO-AIR MISSILE.  |
| AIM-7E | RAYTHEON         | SEA SPARROW  | 1 MK38 OR MK52 | NAVY       | IMPROVED AIM-7D.   |

MISSILE SERIES (CONTINUED)

| MDS     | MANUFACTURER                  | POPULAR NAME | ENGINE DATA    | DEPARTMENT | DESCRIPTION  |
|---------|-------------------------------|--------------|----------------|------------|--|
| ATM-7E  | RAYTHEON/<br>GENERAL DYNAMICS | SEA SPARROW  | 1 MK38         | NAVY       | TRAINING AIM-7E.   |
| CAEM-7E | RAYTHEON/<br>GENERAL DYNAMICS | SPARROW      | 1 MK38         | AF/NAVY    | CATM-7F MODIFIED WITH ELECTRONIC MONITORING EQUIPMENT.   |
| CATM-7E | RAYTHEON                      | SPARROW      |                | AF/NAVY    | CAPTIVE CARRY ATM-7E.  |
| DATM-7E | RAYTHEON/<br>GENERAL DYNAMICS | SPARROW      | 1 MK38         | NAVY       | DUMMY ATM-7E.  |
| AIM-7F  | RAYTHEON                      | SPARROW      | 1 MK58 OR MK65 | AF/NAVY    | IMPROVED AIM-7E WITH SOLID STATE ELECTRONICS.  |
| ATM-7F  | RAYTHEON                      | SPARROW      | 1 MK58         | AF/NAVY    | TRAINING AIM-7F.   |
| RIM-7F  | RAYTHEON                      | SEA SPARROW  | 1 MK58 OR MK65 | NAVY       | SURFACE LAUNCHED VERSION OF AIM-7F.  |
| CAEM-7F | RAYTHEON/<br>GENERAL DYNAMICS | SPARROW      | 1 INERT MK-58  | AF/NAVY    | CATM-7F MODIFIED WITH ELECTRONIC EQUIPMENT FOR ELECTRONIC RECORDING AND SPARROW MISSILE PERFORMANCE EVALUATION.    |
| CATM-7F | RAYTHEON                      | SPARROW      |                | AF/NAVY    | CAPTIVE CARRY ATM-7F.  |
| DATM-7F | RAYTHEON/<br>GENERAL DYNAMICS | SPARROW      | 1 INERT MK-58  | AF/NAVY    | DUMMY ATM-7F.  |
| YRIM-7F | RAYTHEON                      | SEA SPARROW  | 1 MK58 OR MK65 | NAVY       | PROTOTYPE AIM-7F.  |
| RIM-7H  | RAYTHEON                      | SEA SPARROW  | 1 MK38 OR MK52 | NAVY       | SURFACE-TO-AIR VERSION OF AIM-7E. LAUNCHED BY SOLID PROPELLANT BOOSTER AND GUIDED TO TARGET BY SEMI-ACTIVE HOMING. |





MISSILE SERIES (CONTINUED)

| MDS      | MANUFACTURER                  | POPULAR NAME | ENGINE DATA                | DEPARTMENT | DESCRIPTION   |
|----------|-------------------------------|--------------|----------------------------|------------|---|
| YRI M-7H | RAYTHEON                      | SEA SPARROW  | 1 MK38 MOO O<br>MK52 MOO 2 | NAVY       | PROTOTYPE RIM-7H.   |
| AIM-7M   | RAYTHEON                      | SPARROW      | 1 MK59 MOO O               | AF/NAVY    | UPGRADED AIM-7F.  |
| ATM-7M   | RAYTHEON/<br>GENERAL DYNAMICS | SPARROW      | 1 MK58                     | AF/NAVY    | TRAINING AIM-7M.  |
| RIM-7M   | RAYTHEON                      | SEA SPARROW  | 1 MK58 MOD O               | NAVY       | MODIFIED SURFACE LAUNCHED VERSION OF AIM-7F.  |
| CATM-7M  | RAYTHEON/<br>GENERAL DYNAMICS | SPARROW      | 1 MK58                     | AF/NAVY    | CATM-7M MODIFIED WITH ELECTRONIC MONITORING EQUIPMENT.  |
| CATM-7M  | RAYTHEON/<br>GENERAL DYNAMICS | SPARROW      | 1 MK58                     | AF/NAVY    | CAPTIVE CARRY ATM-7M.   |
| DATM-7M  | RAYTHEON/<br>GENERAL DYNAMICS | SPARROW      | 1 MK58                     | AF/NAVY    | DUMMY ATM-7M.   |
| AIM-7N   | RAYTHEON                      | SPARROW      | 1 MK59 MOD O               | NAVY       | UPDATED AIM-7F USED WITH MULTI-STAGE IMPROVEMENT PROGRAM (MSIP) - MODIFIED F-15'S                                     |
| AIM-7P   | RAYTHEON                      | SPARROW      | 1 MK59 MOD O               | NAVY       | MODIFIED AIM-7M WITH IMPROVED ELECTRONIC COUNTER MEASURES. FUZE TARGET DETECTOR AND LOWER MINIMUM OPERATING ALTITUDE. |
| RIM-7P   | RAYTHEON                      | SPARROW      | 1 MK58 MOD O               | NAVY       | RIM-7M MODIFIED TO INCLUDE IMPROVED ELECTRONIC COUNTERMEASURES, FUZE TARGET DETECTOR.                                 |

MISSILE SERIES (CONTINUED)

| MDS    | MANUFACTURER                  | POPULAR NAME | ENGINE DATA    | DEPARTMENT | DESCRIPTION  |
|--------|-------------------------------|--------------|----------------|------------|--|
| AIM-7R | RAYTHEON/<br>GENERAL DYNAMICS | SPARROW      | 1 MK58 MOD 5   | NAVY       | MODIFIED AIM-7 WITH DUAL SEEKER MODES AND TERMINAL HOMING.                               |
| RIM-7R | RAYTHEON/<br>GENERAL DYNAMICS | SPARROW      | 1 MK58 MOD 4   | NAVY       | MODIFIED AIM-7 WITH DUAL SEEKER MODES AND TERMINAL HOMING, SHIP LAUNCHED.                |
| RGM-8H | BENDIX                        | TALOS        | 1 MK11 MOD 2/5 | NAVY       | RIM-8G WITH TERMINAL GUIDANCE SYSTEM.  |
| RIM-8H | BENDIX                        | TALOS        | 1 MK11 MOD 2/5 | NAVY       | LONG-RANGE, SURFACE-TO-AIR, TWO-STAGE, SUPERSONIC MISSILE WITH TERMINAL GUIDANCE SYSTEM. |
| AIM-9B | PHILCO &<br>GEN ELECTRIC      | SIDEWINDER   | 1 MK17         | NAVY       | SUPERSONIC, AIR-TO-AIR, HOMING WEAPON WITH PASSIVE INFRARED TARGET DETECTION.            |
| AIM-9D | PHILCO &<br>RAYTHEON          | SIDEWINDER   | 1 MK36         | NAVY       | UPGRADED AIM-9B.   |
| ATM-90 | PHILCO &<br>RAYTHEON          | SIDEWINDER   | 1 MK36         | NAVY       | AIM-90 USED FOR CAPTIVE FLIGHT TARGET ACQUISITION TRAINING.                              |
| AIM-9E | PHILCO                        | SIDEWINDER   | 1 MK17         | AF         | UPGRADED AIM-9B MODIFIED TO EXTEND PERFORMANCE ENVELOPE.                                 |
| AIM-9G | RAYTHEON                      | SIDEWINDER   | 1 MK36         | NAVY       | UPGRADED AIM-90 WITH SIDEWINDER EXPANDED ACQUISITION MODE (SEAM).                        |
| ATM-9G | RAYTHEON                      | SIDEWINDER   | 1 MK36         | NAVY       | AIM-9G USED FOR CAPTIVE FLIGHT TARGET ACQUISITION TRAINING.                              |
| AIM-9H | RAYTHEON<br>(GCG ONLY)        | SIDEWINDER   | 1 MK36         | NAVY       | UPGRADED AIM-9G WITH SOLID STATE GUIDANCE CONTROL.                                       |

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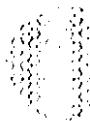


MISSILE SERIES (CONTINUED)

| MDS     | MANUFACTURER     | POPULAR NAME | ENGINE DATA             | DEPARTMENT | DESCRIPTION  |
|---------|------------------|--------------|-------------------------|------------|--|
| AIM-9J  | PHILCO           | SIDEWINDER   | 1 MK17                  | AF         | UPGRADED AIM-9E.   |
| AIM-9K  | RAYTHEON         | SIDEWINDER   | 1 MK36                  | NAVY       | UPGRADED AIM-9H.   |
| AIM-9L  | RAYTHEON         | SIDEWINDER   | 1 MK36                  | AF/NAVY    | UPGRADED AIM-9H WITH COOLED SEEKER FOR INCREASED ENGAGEMENT ENVELOPE.  |
| DATM-9L | FORD<br>RAYTHEON | SIDEWINDER   | 1 MK57 (INERT)          | NAVY/AF    | USED TO TRAIN GROUND PERSONNEL IN MISSILE ASSEMBLY, DISASSEMBLY, LOADING, TRANSPORTATION, AND STORAGE PROCEDURES AND TECHNIQUES. |
| AIM-9M  | RAYTHEON         | SIDEWINDER   | 1 MK36                  | AF/NAVY    | UPGRADED AIM-9L.   |
| CATM-9M | FORD<br>RAYTHEON | SIDEWINDER   | 1 MK57 (INERT)          | NAVY/AF    | USED FOR PILOT TRAINING IN AERIAL TARGET ACQUISITION AND USE OF AIRCRAFT CONTROLS/DISPLAYS.                                      |
| NATM-9M | FORD<br>RAYTHEON | SIDEWINDER   | 1 MK36                  | NAVY/AF    | PERMANENT TEST MISSILE. AIM-9 MODIFIED BY REPLACING LIVE TEST WARHEAD AND/OR TELEMETRY SECTION.                                  |
| AIM-9N  | RAYTHEON         | SIDEWINDER   | 1 MK36                  | AF         | UPGRADED AIM-9J.   |
| AIM-9P  | RAYTHEON         | SIDEWINDER   | 1 MK36                  | AF         | UPGRADED AIM-9J.   |
| AIM-9Q  | RAYTHEON         | SIDEWINDER   | 1 MK36 MOD 8/<br>MOD 10 | NAVY       | AIM-9M MODIFIED WITH UPGRADED GUIDANCE-CONTROL SECTION.  |
| AIM-9R  | RAYTHEON         | SIDEWINDER   | 1 MK36                  | NAVY       | IMPROVED HEAD-ON ACQUISITION RANGE AND COUNTER-COUNTERMEASURES (CCM) CAPABILITY.   |

MISSILE SERIES (CONTINUED)

| MDS     | MANUFACTURER         | POPULAR NAME       | ENGINE DATA                  | DEPARTMENT | DESCRIPTION   |
|---------|----------------------|--------------------|------------------------------|------------|---|
| AIM-9S  | RAYTHEON             | SIDEWINDER         | 1 MK36 MOD8/MOD10            | NAVY       | MODIFIED AIM-9M WITH THE COUNTER-COUNTERMEASURES (CCM) EQUIPMENT REMOVED FROM THE GUIDANCE CONTROL SECTION. USED FOR FMS. |
| CQM-10B | BOEING               | BOMARC             | 3 1 M51 AND<br>2 RJ-43-MA-11 | AF/NAVY    | SURFACE-TO-AIR, LONG-RANGE, AREA DEFENSE MISSILE CONFIGURED AS ORONE.   |
| AGM-12A | MARTIN &<br>MAXSON   | BULLPUP            | 1 MK8                        | NAVY       | AIR-TO-SURFACE, TACTICAL, GUIDED MISSILE.   |
| ATM-12A | MARTIN               | BULLPUP<br>TRAINER | 1 MK8                        | NAVY       | TRAINER VERSION OF AGM-12A.   |
| AGM-12B | MARTIN &<br>MAXSON   | BULLPUP            | 1 LR-58-RM-4<br>MK8          | NAVY       | UPGRADED AGM-12A. RADIO-LINK COMMAND GUIDANCE.  |
| ATM-12B | MAXSON               | BULLPUP<br>TRAINER | 1 MK8                        | NAVY       | TRAINER VERSION OF AGM-12B.   |
| AGM-12C | MARTIN               | BULLPUP            | 1 LR-62-RM-2/-4              | NAVY       | UPGRADED AGM-12B.   |
| MIM-14A | MCDONNELL<br>DOUGLAS | NIKE HERCULES      | 1 M-30                       | ARMY       | HIGH ALTITUDE, AIR DEFENSE MISSILE CAPABLE OF SURFACE-TO-AIR AND SURFACE-TO-SURFACE MISSIONS.                             |
| MIM-14B | MCDONNELL<br>DOUGLAS | NIKE HERCULES      | 1 M-30A-1                    | ARMY       | UPGRADED MIM-14A.   |
| MIM-14C | MCDONNELL<br>DOUGLAS | NIKE HERCULES      | 1 M-30A-2                    | ARMY       | UPGRADED MIM-14B.   |





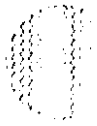
MISSILE SERIES (CONTINUED)

| MDS      | MANUFACTURER  | POPULAR NAME | ENGINE DATA | DEPARTMENT  | DESCRIPTION  |
|----------|---------------|--------------|-------------|-------------|--|
| RGM-15A  | LTV AEROSPACE | REGULUS I I  |             | NAVY        | NONE.  |
| XMIM-23A | RAYTHEON      | HAWK         | 1 XM-112    | ARMY        | PROTOTYPE MIM-23 .   |
| MIM-23B  | USAMICOM      | HAWK         | 1 XM-112    | NAVY I ARMY | UPGRADED MI M-23A.   |
| XMEM-23B | USAMI COM     | HAWK         | 1 XM-112    | ARMY        | FULL TELEMETRY VERSION OF MIM-23B.   |
| XMTM-23B | USAMICOM      | HAWK         | 1 XM-112    | ARMY        | MIM-23B USED TO TRAIN BATTERY PERSONNEL,   |
| MEM-23c  | RAYTHEON      | HAWK         | 1 XM-112    | ARMY        | FULL TELEMETRY VERSION OF MIM-23C.   |
| MI M-23C | RAYTHEON      | HAWK         | 1 XM-112    | ARMY        | UPGRADED MI M-23B.   |
| MEM-23D  | RAYTHEON      | HAWK         | 1 XM-112    | ARMY        | MEM-23C WITH IMPROVED GUIDANCE IN A MULTI-JAMMING ENVIRONMENT .                    |
| MI M-23D | RAYTHEON      | HAWK         | XM-112      | ARMY        | UPGRADED MIM-23C.  |
| MEM-23E  | RAYTHEON      | HAWK         | 1 XM-112    | ARMY        | MEM-23D MODIFIED WITH NEW BOOY SECTION ASSEMBLY.                                   |
| MIM-23E  | RAYTHEON      | HAWK         | 1 XM-112    | ARMY        | MI M-23C WITH IMPROVED GUIDANCE IN A MULTI-JAMMING ENVIRONMENT.                    |
| MEM-23 F | RAYTHEON      | HAWK         | 1 XM-112    | ARMY        | MEM-23E MODIFIED WITH FUZE DELAY CIRCUIT AND INCREASED WARHEAD FRAGMENTATION SIZE. |
| MI M-23F | RAYTHEON      | HAWK         | 1 XM-112    | ARMY        | MIM-23D WITH IMPROVED GUIDANCE IN A MULTI-JAMMING ENVIRONMENT .                    |

MISSILE SERIES (CONTINUED)

| MDS     | MANUFACTURER     | POPULAR NAME | ENGINE DATA  | DEPARTMENT | DESCRIPTION  |
|---------|------------------|--------------|--------------|------------|--|
| MIM-23G | RAYTHEON         | HAWK         | 1 XM-112     | ARMY       | MIM-23E MODIFIED WITH NEW BODY SECTION ASSEMBLY.   |
| MIM-23H | RAYTHEON         | HAWK         | 1 XM-112     | ARMY       | MIM-23F MODIFIED WITH NEW BODY SECTION ASSEMBLY.   |
| MIM-23J | RAYTHEON         | HAWK         | 1 XM-112     | ARMY       | MIM-23H MODIFIED WITH FUZE DELAY CIRCUIT AND INCREASED WARHEAD FRAGMENTATION SIZE.   |
| MIM-23K | RAYTHEON         | HAWK         | 1 XM-112     | ARMY       | MIM-23G MODIFIED WITH FUZE DELAY CIRCUIT AND INCREASED WARHEAD FRAGMENTATION SIZE.   |
| MIM-23L | RAYTHEON         | HAWK         |              | ARMY       | MIM-23G MODIFIED WITH A FUZE DELAY CIRCUIT.  |
| MIM-23M | RAYTHEON         | HAWK         |              | ARMY       | MIM-23H MODIFIED WITH A FUZE DELAY CIRCUIT.  |
| RIM-24A | GENERAL DYNAMICS | TARTAR       | 1 MK27 MOD 2 | NAVY       | SURFACE-TO-AIR SHIP BORNE MISSILE. LAUNCHED BY SOLID PROPELLANT ROCKET INTO CONTINUOUS WAVE ILLUMINATOR BEAM. DIRECTED TO TARGET BY SEMI ACTIVE HOMING SYSTEM. |
| RIM-24B | GENERAL DYNAMICS | TARTAR       | 1 MK27 MOD 2 | NAVY       | UPGRADED RIM-24A,  |
| RIM-24C | GENERAL DYNAMICS | TARTAR       |              | NAVY       | UPGRADED RIM-24B.  |
| LGM-25C | MARTIN           | TITAN 11     | 2            | AF         | INERTIALLY GUIDED, LIQUID PROPELLANT, 2-STAGE ICBM.  |
| UGM-27A | LOCKHEED         | POLARIS      |              | NAVY       | 3-STAGE, INERTIALLY GUIDED, SOLID PROPELLANT SLBM.   |
| UGM-27B | LOCKHEED         | POLARIS      | 2 A-2P       | NAVY       | IMPROVED UGM-27A.  |





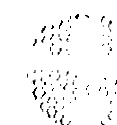
MISSILE SERIES (CONTINUED)

| MOS      | MANUFACTURER               | POPULAR NAME        | ENGINE DATA  | DEPARTMENT | DESCRIPTION  |
|----------|----------------------------|---------------------|--|------------|--|
| UGM-27C  | LOCKHEED                   | POLARIS             | 2 A-3P   | NAVY       | IMPROVED <b>UGM-27B</b> .  |
| AGM-28B  | NORTH AMERICAN<br>ROCKWELL | HOUND DOG           | 1 <b>J52-P-3</b>   | AF         | SUPERSONIC, JET PROPELLED, AIR-TO-SURFACE, <b>INERTIALLY</b><br>GUIDED, STANDOFF STRATEGIC MISSILE.          |
| MGM-29A  | <b>USAMI</b> COM           | SERGEANT            | <b>1 M100</b>  | ARMY       | FIELD ARTILLERY, INERTIAL-GUIDANCE MISSILE.  |
| LGM-30B  | BOEING                     | MINUTEMAN II        | 3 61-KS, <b>M55AI</b> 60-KS<br><b>M56AI 48-DS, M57AI</b> | AF         | SOLID-FUEL, 3-STAGE <b>ICBM</b> IN HARDENED UNDERGROUND SILOS<br>(INERTIAL-GUIDANCE SYSTEM).                 |
| LGM-30F  | BOEING                     | <b>MINUTEMAN</b> II | <b>1</b> M55E  | AF         | UPGRADED <b>LGM-30B</b> WITH MORE SOPHISTICATED GUIDANCE SYSTEM<br>AND LONGER RANGE.                         |
| LGM-30G  | BOEING                     | MINUTEMAN III       | <b>1</b> M55E  | AF         | UPGRADED <b>LGM-30F</b> WITH MIRV WARHEAD.   |
| XMGM-31A | <b>MARTIN</b>              | PERSHING            | 2 XM-101   | ARMY       | FIELD <b>ARTILLERY</b> , SURFACE-TO-SURFACE, 2 STAGE, SOLID<br>PROPELLANT, <b>INERTIALLY</b> GUIDED MISSILE. |
| MQM-33A  | NORTHROP<br>VENTURA        | NONE                | 1 O-100-2  | ARMY       | RADIO CONTROLLED, HIGH-WING, MONOPLANE TARGET MISSILE<br>(RECOVERABLE).                                      |
| MQM-33B  | NORTHROP<br>VENTURA        | NONE                | <b>1</b> I-100-2   | ARMY       | UPGRADED <b>MQM-33A</b> USING A DIRECT COMMAND GUIDANCE SYSTEM.  |
| MQM-33C  | NORTHROP<br>VENTURA        | <b>NONE</b>         | 1 O-100-2  | ARMY       | UPGRADED <b>MQM-33B</b> .  |
| MQM-33D  | NORTHROP<br>VENTURA        | NONE                | 1 O-100-2  | ARMY       | UPGRADED <b>MQM-33C</b> .  |

MISSILE SERIES (CONTINUED)

| MDS     | MANUFACTURER     | POPULAR NAME | ENGINE DATA   | DEPARTMENT | DESCRIPTION  |
|---------|------------------|--------------|---------------|------------|--|
| BQM-34A | RYAN             | FIREBEE      | 1 J69-T-29    | AF         | RECOVERABLE, AIR OR GROUND LAUNCHED, RADIO-COMMAND-GUIDED TARGET DRONE.        |
| MQM-34D | RYAN             | FIREBEE      | 2 J85-7       | ARMY       | RYAN MODEL 124-E TURBOJET TARGET GUIDED MISSILE.                               |
| BQM-34E | RYAN             | FIREBEE      | 1 YF-69-T-406 | NAVY       | NAVY VERSION OF BQM-34A.   |
| BQM-34F | RYAN             | FIREBEE      | 1 YF-69-T-406 | AF         | USAF VERSION OF BQM-34E.   |
| AQM-34L | RYAN             | FIREBEE      | 1 J69-T-41A   | AF         | UPGRADED BQM-34A.  |
| AQM-34M | RYAN             | FIREBEE      | 1 J69-5-41A   | AF         | UPGRADED BQM-34A.  |
| ARM-34P | RYAN             | FIREBEE      | 1 J100-CA-100 | AF         | UPGRADED BQM-34A.  |
| AQM-34R | RYAN             | FIREBEE      | 1 J100-CA-100 | AF         | UPGRADED BQM-34A.  |
| BQM-34S | RYAN             | FIREBEE      | 1 YJ-69T-406  | NAVY       | UPGRADED BQM-34E WITH INTEGRATED TARGET CONTROL SYSTEM AN/USQ-3 (NA-70-1495) , |
| BQM-34T | RYAN             | FIREBEE      | 1 YJ-69T-406  | NAVY       | BQM-34E MODIFIED WITH TRANSPONDER SET AN/ DKW-1 AND AUTOPILOT A/ A37-G-9 .     |
| AQM-34V | RYAN             | FIREBEE      | 1 J69-T-29A   | AF         | MODIFIED AQM-34H/J WITH ECM AND GROUND/AIR LAUNCH CAPABILITY ,                 |
| MQM-36A | NORTHROP VENTURA | NONE         | 1 O-100-2     | NAVY       | SMALL PROPELLER DRIVER TARGET DRONE.   |

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MISSILE SERIES (CONTINUED)

| MDS            | MANUFACTURER                 | POPULAR NAME | ENGINE DATA    | DEPARTMENT     | DESCRIPTION  |
|----------------|------------------------------|--------------|----------------|----------------|--|
| <b>AQM-37A</b> | BEECH                        | NONE         | 1 LR64-NA-4    | NAVY           | AIR- <b>LAUNCHED</b> TARGET EMPLOYING LIQUID PROPELLANT MOTOR AND PROGRAMMED GUIDANCE.   |
| <b>AQM-37C</b> | BEECH                        | NONE         | 1 LR64-NA-4    | NAVY           | UPGRADED <b>AQM-37A</b> .  |
| <b>AQM-37D</b> | BEECH                        | NONE         | 1 LR64-NA-4    | NAVY           | <b>AQM-37C</b> MODIFIED TO REPLACE OBSOLETE COMPONENTS INCLUDING A NEW BATTERY, GYROS, DIGITAL AVIONICS PROCESSOR, AND RADAR AUGMENTATION SUITE. |
| <b>FIM-43A</b> | <b>USAMICOM</b>              | REDEYE       | 1 M99          | ARMY           | ANTI-AIRCRAFT MISSILE USING INFRARED SEEKER AND ELECTROMECHANICAL GUIDANCE DEVICE.   |
| <b>FEM-43B</b> | USAMICOM                     | REDEYE       | 1 M-110        | ARMY           | <b>FIM-43B</b> MODIFIED TO TRANSMIT SIGNALS USED BY GROUND UNIT TO INTERPRET MISSILE FUNCTION.   |
| <b>FIM-43B</b> | <b>USAMICOM</b>              | REDEYE       | 1 M-no         | ARMY           | UPGRADED <b>FIM-43A</b> .  |
| FEM-43C        | <b>USAMICOM</b>              | REDEYE       | 1 M-115        | ARMY           | UPGRAOED <b>FEM-43B</b> WITH NEW LAUNCHER AND TEST EQUIPMENT.  |
| <b>FIM-43C</b> | <b>USAMICOM</b>              | REOEYE       | 1 M-115        | ARMY           | UPGRADED <b>FIM-43B</b> WITH NEW LAUNCHER AND TEST EQUIPMENT.  |
| <b>FIM-43D</b> | <b>USAMICOM</b>              | REDEYE       | 1 M-115        | ARMY           | UPGRADED <b>FIM-43C</b> .  |
| <b>UUM-44A</b> | GOODYEAR                     | SUBROC       |                | NAVY           | NONE.  |
| <b>AGM-45A</b> | TEXAS INSTRUMENT<br>& UNIVAC | SHRIKE       | 1 MK39 OR MK53 | <b>AF/NAVY</b> | AIR-TO-SURFACE TACTICAL MISSILE USED TO DESTROY RADIATION TARGETS.   |
| <b>AGM-45B</b> | TEXAS INSTRUMENT<br>& UNIVAC | SHRIKE       | 1 MK78         | AF/NAVY        | UPGRADED <b>AGM-45A</b> .  |

# MISSILE SERIES (CONTINUED)

| MDS             | MANUFACTURER                       | POPULAR NAME  | ENGINE DATA    | DEPARTMENT | DESCRIPTION  |
|-----------------|------------------------------------|---------------|----------------|------------|--|
| <b>ATM-45B</b>  | TEXAS INSTRUMENT                   | <b>SHRIKE</b> | 1 <b>MK78</b>  | A F/ NAVY  | TRAINING AGM-45A.  |
| KM-51A          | <b>USAMICOM</b>                    | SHILLELAGH    | 1 MK78         | ARMY       | DIRECT FIRE, LINE-OF-SIGHT <b>GUIDED</b> MISSILE WITH SOLID PROPELLANTS AND SHAPED CHARGE, HIGH EXPLOSIVE WARHEAD. |
| <b>MTM-51A</b>  | <b>USAMI COM</b>                   | SHILLELAGH    | 1 MK78         | ARMY       | TRAINING <b>MGM-51A</b> .  |
| <b>MGM-51 B</b> | <b>USAMI COM</b>                   | SHILLELAGH    | 1 MK 78        | ARMY       | UPGRADED <b>MGM-51A</b> .  |
| <b>MTM-51 B</b> | <b>USAMI COM</b>                   | SHILLELAGH    | 1 MK 78        | ARMY       | TRAINING <b>MGM-51B</b> .  |
| <b>MGM-51 C</b> | <b>USAMICOM</b>                    | SHILLELAGH    | 1 <b>MK78</b>  | ARMY       | <b>MGM-51B</b> WITH SHALLOW WARHEAD INDEX KEY TO BE <b>FIRE</b> D FROM <b>SHALLOW</b> KEY GUN LAUNCHER.            |
| <b>MTM-51 C</b> | <b>USAMI COM</b>                   | SHILLELAGH    | 1 MK 78        | ARMY       | TRAINING MI <b>M-51B</b> .   |
| <b>MGM-52B</b>  | <b>USAMICOM</b>                    | LANCE         | 2 T22          | ARMY       | CLASSIFIED MISSILE.  |
| <b>MGM-52C</b>  | <b>USAMICOM</b>                    | LANCE         | 2 <b>T22</b>   | ARMY       | <b>UPGRADED MGM-52B</b> .  |
| <b>AGM-53A</b>  | NORTH <b>AMERI</b> CAN<br>ROCKWELL | CONDOR        | 1 <b>MK70</b>  | NAVY       | LONG RANGE, ELECTRO-OPTICAL <b>GUIDED</b> MISSILE.   |
| <b>AGM-53B</b>  | NORTH <b>AMERI</b> CAN<br>ROCKWELL | CONDOR        | 1 <b>MK70</b>  | NAVY       | UPGRADED <b>AGM-53A</b> WITH ELECTROMAGNETIC INTERFERENCE (EMI) CAPABILITY.  |
| AEM-54A         | HUGHES                             | PHOENIX       | 1 MK47 OR MK60 | NAVY       | AIM-54A WITH INERT PROPULSION AND ARMAMENT SECTIONS AND TELEMETRY EVALUATION KIT. USED AS CAPTIVE/CARRY MISSILE.   |





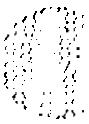
# MISSILE SERIES (CONTINUED)

| MDS      | MANUFACTURER | POPULAR NAME | ENGINE DATA    | DEPARTMENT | DESCRIPTION   |
|----------|--------------|--------------|----------------|------------|---|
| AIM-54A  | HUGHES       | PHOENIX      | 1 MK47 OR MK60 | NAVY       | LONG-RANGE, TACTICAL, AIR-TO-AIR MISSILE.   |
| ATM-54A  | NOVORDSTA    | PHOENIX      | 1 MK47 OR MK60 | NAVY       | DUMMY AIM-54A.  |
| AEM-54B  | HUGHES       | PHOENIX      | 1 MK47 OR MK60 | NAVY       | AIM-54A WITH INERT ARMAMENT SECTION AND TELEMETRY EQUIPMENT. USED FOR MISSILE FLIGHT EVALUATION.  |
| ATM-54B  | HUGHES       | PHOENIX      | 1 MK47 OR MK60 | NAVY       | TRAINING AIM-54A,   |
| AIM-54C  | HUGHES       | PHOENIX      | 1 MK47 OR MK60 | NAVY       | UPGRADED AIM-54A.   |
| XAIM-54C | HUGHES       | PHOENIX      | 1 MK47 OR MK60 | NAVY       | EXPERIMENTAL VERSION OF THE AIM-54C WITH DIGITAL TECHNOLOGY.  |
| YAIM-54C | HUGHES       | PHOENIX      | 1 MK47 OR MK60 | NAVY       | PROTOTYPE AIM-54C.  |
| RI M-55A | BENDIX       | TYPHON (MR)  |                | NAVY       | NONE.   |
| ZRGM-59A | TBD          | NONE         |                | NAVY       | SHIP- LAUNCHED, ROCKET-PROPELLED, SURFACE-TO-SURFACE, GUIDED MISSILE FOR AMPHIBIOUS OPERATIONS SUPPORT (LANDING FORCE SUPPORT WEAPON) . |
| MQM-61 A | BEECH        | CARDINAL     | 1 TC-6150-J-3  | ARMY       | PROPELLER-DRIVEN, GUIDED MISSILE.   |
| AGM-65A  | HUGHES       | MAVERICK     | 1 SR-109-TC-1  | AF         | AIR-TO-SURFACE, TV-GUIDED TACTICAL MISSILE.   |
| AGM-65B  | HUGHES       | MAVERICK     | 1 SR-109-TC-1  | AF         | UPGRADED AGM-65A WITH VIEW MAGNIFICATION.   |
| AGM-65D  | HUGHES       | MAVERICK     | 1 SR-109-TC-1  | AF         | UPGRADED AGM-65B WITH INFRARED HOMING GUIDANCE SYSTEM.  |

MISSILE SERIES (CONTINUED)

| MDS             | MANUFACTURER     | POPULAR NAME | ENGINE DATA         | DEPARTMENT | DESCRIPTION  |
|-----------------|------------------|--------------|---------------------|------------|--|
| AGM-65E         | HUGHES           | MAVERICK     | 1 SR-109-TC-1       | NAVY       | NAVY VERSION OF <b>AGM-65</b> .  |
| <b>AGM-65F</b>  | HUGHES           | MAVERICK     | 1 SR-109-TC-1       | NAVY       | <b>AGM-65D</b> MODIFIED WITH MAVERICK ALTERNATE WARHEAD AND REDUCED SMOKE ROCKET MOTOR.  |
| CATM-65 F       | HUGHES           | MAVERICK     | 1 SR-114-TC-1       | NAVY       | CAPTIVE/CARRY TRAINING VERSION OF <b>AGM-65F</b> .   |
| <b>AGM-65G</b>  | HUGHES           | MAVERICK     | 1 SR-109-TC-1       | NAVY       | <b>AGM-65F</b> WITH UNIQUE EMBEDDED SOFTWARE AND NO SAFETY AND ARMING <b>DEVICE</b> .  |
| <b>AGM-65H</b>  | HUGHES           | MAVERICK     | 1 SR-109-TC-1       | AF         | <b>AGM-65</b> WITH <b>UPGRADED</b> TELEVISION GUIDANCE CAPABILITY.   |
| <b>YRIM-66A</b> | GENERAL DYNAMICS | STANDARD     | 1 <b>MK27</b> MOD 0 | NAVY       | SUPERSONIC, SURFACE-TO-AIR AND SURFACE-TO-SURFACE WEAPON FOR SHIPBOARD USE, EQUAL THRUST, <b>SOLID</b> PROPELLANT MOTOR. CONTINUOUS WAVE SEMI ACTIVE HOMING SYSTEM. PROTOTYPE. |
| <b>RIM-66B</b>  | GENERAL DYNAMICS | STANDARD     | 1 MK56 MOD 0        | NAVY       | PRODUCT ION YR1 M-66A.   |
| <b>RI M-66C</b> | GENERAL DYNAMICS | STANDARD     | 1 MK56 MOD 0        | NAVY       | UPGRADED <b>RI M-66B</b> ADAPTED TO AEGIS MISSILE SYSTEM.  |
| <b>RGM-66D</b>  | GENERAL DYNAMICS | STANDARD     | 1 MK56 MOD 0        | NAVY       | <b>RI M-66B</b> MODIFIED AS SURFACE-TO-SURFACE, ANTI-RADIATION MISSILE.  |
| <b>RTM-66D</b>  | GENERAL DYNAMICS | STANDARD     | 1 MK56 MOD 0        | NAVY       | TRAINING <b>RGM-66D</b> .  |
| <b>RGM-66E</b>  | GENERAL DYNAMICS | STANDARD     | 1 MK56 MOD 0        | NAVY       | <b>RGM-66D</b> ADAPTED TO ASROC LAUNCHER,  |

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MISSILE SERIES (CONTINUED)

| MDS      | MANUFACTURER              | POPULAR NAME | ENGINE DATA                           | DEPARTMENT | DESCRIPTION   |
|----------|---------------------------|--------------|---------------------------------------|------------|---|
| RIM-66E  | GENERAL DYNAMICS          | STANDARD     | 1 MK56 MOD 0                          | NAVY       | SURFACE-TO-AIR GUIDED MISSILE FOR SHIPBOARD OFFENSE. ALL ELECTRIC WITH SEMI-ACTIVE HOMING GUIDANCE.   |
| RI M-66G | GENERAL DYNAMICS          | STANDARD     | 1 MK-104 MOD 0                        | NAVY       | RI M-66C MODIFIED WITH IMPROVED GUIDANCE SECTION, TELEMETER UNIT, AND ROCKET MOTOR.   |
| RI M-66H | GENERAL DYNAMICS          | STANDARD     | 1 MK-104 MOD 0                        | NAVY       | RI M-66G WITH MK51 MOD 0 CONTROL FIN SET.   |
| RI M-66J | GENERAL DYNAMICS          | STANDARD     | 1 MK-104 MOD 0                        | NAVY       | RIM-660 MODIFIED WITH IMPROVED GUIDANCE SECTION, TELEMETER UNIT, AND ROCKET MOTOR.  |
| RI M-66K | GENERAL DYNAMICS RAYTHEON | STANDARD     | 1 MK-104 MOD 1                        | NAVY       | RI M-66J MODIFIED WITH IMPROVED TARGET DETECTION LOGIC. RAIL LAUNCHED SHIPBOARD OFFENSE MISSILE.  |
| RI M-66L | GENERAL DYNAMICS RAYTHEON | STANDARD     | 1 MK-104 MOD 1                        | NAVY       | RI M-66G MODIFIED WITH IMPROVED DETECTION LOGIC, IMPROVED GUIDANCE FOR LOW LEVEL PERFORMANCE, AND SHROUD ASSEMBLY.                                |
| RI M-66M | GENERAL DYNAMICS RAYTHEON | STANDARD     | 1 MK-104 MOD 1                        | NAVY       | RI M-66H MODIFIED WITH IMPROVED DETECTION LOGIC, GUIDANCE, AND SHROUD ASSEMBLY.   |
| YRIM-67A | GENERAL DYNAMICS          | STANDARD     | 2 SUST MK30 MOD 1<br>BSTR MK-12 MOD 1 | NAVY       | SURFACE-TO-AIR AND SURFACE-TO-SURFACE WEAPON FOR SHIPBOARD USE. 2-STAGE SOLID PROPELLANT ACTIVE HOMING SYSTEM, PROTOTYPE.                         |
| YRQM-67A | HUGHES                    | STANDARD     | N/A                                   | NAVY       | PROTOTYPE SHIP-LAUNCHED TARGET FLYING PRE-PROGRAMMED TRAJECTORY.  |
| RI M-67B | GENERAL DYNAMICS          | STANDARD     | 2 SOLID                               | NAVY       | SHIPBOARD SURFACE-TO-AIR AND SURFACE-TO-SURFACE WEAPON WHICH EMPLOYS MIDCOURSE COMMAND POINT GUIDANCE AND TERMINAL SEMI-ACTIVE OR PASSING HOMING, |

MISSILE SERIES (CONTINUED)

| MDS     | MANUFACTURER     | POPULAR NAME | ENGINE DATA               | DEPARTMENT | DESCRIPTION  |
|---------|------------------|--------------|---------------------------|------------|--|
| RIM-67C | GENERAL DYNAMICS | STANDARD     | 2 SOLID                   | NAVY       | RIM-67B MODIFIED WITH IMPROVED GUIDANCE AND TARGET DETECTING SHROUD.   |
| RIM-67D | GENERAL DYNAMICS | STANDARD     | 2 SOLID                   | NAVY       | A RAIL LAUNCHED VERSION OF THE RIM-67 WITH IMPROVED GUIDANCE AND AUTOPILOT BATTERY SECTION.                      |
| AGM-69A | BOEING           | SRAM         | 1 XSR-75-LP-1             | AF         | SHORT RANGE, AIR-TO-SURFACE, ATTACK MISSILE (SRAM).  |
| AGM-69B | BOEING           | SRAM         | 1 XSR-75-LP-1             | AF         | UPGRADED AS M-69A.   |
| BGM-71A | HUGHES           | TOW          | 1 SUSTAINER BOOSTER M-114 | ARMY       | AERODYNAMICALLY MANEUVERED, TUBE-LAUNCHED, OPTICALLY-TRACKED, WIRE COMMAND LINK, SURFACE ATTACK, GUIDED MISSILE. |
| BTM-71A | HUGHES           | TOW          | SUSTAINER BOOSTER M-114   | ARMY       | TRAINING BGM-71A.  |
| BGM-71B | HUGHES           | TOW          | SUSTAINER BOOSTER M-114   | ARMY       | UPGRADED BGM-71A.  |
| BTM-71B | USAMICOM         | TOW          | SUSTAINER BOOSTER M-114   | ARMY       | TRAINING BGM-71B.  |
| BGM-71C | HUGHES           | TOW          | SUSTAINER BOOSTER M-114   | ARMY       | UPGRADED BGM-71B. IMPROVED WARHEAD WITH CONTACT ACTUATED PROBE.  |
| BGM-71D | HUGHES           | TOW          | SUSTAINER BOOSTER M-114   | ARMY       | UPGRADED BGM-71C.  |



MISSILE SERIES (CONTINUED)

| MDS      | MANUFACTURER   | POPULAR NAME | ENGINE DATA                  | DEPARTMENT | DESCRIPTION   |
|----------|----------------|--------------|------------------------------|------------|---|
| BGM-71 E | HUGHES         | TOW          | 1 SUSTAINER<br>BOOSTER M-114 | ARMY       | IMPROVED WARHEAD CAPABILITY OVER BGM-71D.   |
| BGM-71 F | USAMICOM       | TOW          | 1 SUSTAINER<br>BOOSTER M114  | ARMY       | BGM-71E WITH IMPROVED WARHEAD.  |
| BGM-71G  | HUGHES         | TOW          | 1 SUSTAINER<br>BOOSTER M-114 | ARMY       | IMPROVED WARHEAD CAPABILITY OVER BGM-71F (ARMOR PIERCING WARHEAD) .                 |
| MI M-72A | USAMICOM       | CHAPARRAL    | 1 MK50 MOD O                 | ARMY       | SUPERSONIC, IR SEEKER MISSILE USED TO ATTACK LOW-FLYING TARGET .                    |
| MI M-72B | USAMICOM       | CHAPARRAL    | 1 MK50 MOD O                 | ARMY "     | UPGRADED MI M-72A.  |
| MI M-72C | USAMICOM       | CHAPARRAL    | 1 MK50 MOD O                 | ARMY       | UPGRADED MI M-72B.  |
| XMIM-72D | USAMICOM       | CHAPARRAL    | 1 MK50 MOD O                 | ARMY       | UPGRADED MI M-72C. IMPROVED WARHEAD AND DIRECTIONAL DOPPLER FUSE. EXPERIMENTAL.     |
| MI M-72E | USAMI COM      | CHAPARRAL    | 1 MK50 MOD O                 | ARMY       | UPGRADED MI M-72D.  |
| MI M-72F | USAMICOM       | CHAPARRAL    | 1 MK50 MOD O                 | ARMY       | UPGRADED MI M-72E.  |
| MI M-72G | FORD AEROSPACE | CHAPARRAL    | 1 M-121                      | ARMY       | SIMILAR TO MIM-72C WITH AN/DAW-2 GUIDANCE SECTION.                                  |
| MI M-72H | FORD AEROSPACE | CHAPARRAL    | 1 M-121                      | ARMY       | UPGRADED MI M-72F.  |
| MI M-72J | LORAL          | CHAPARRAL    | 1 M-121                      | ARMY       | SIMILAR TO MIM-72G WITH REDUCED CAPABILITY GUIDANCE AND CONTROL SYSTEM FOR EXPORT . |

MISSILE SERIES (CONTINUED)

| MDS      | MANUFACTURER        | POPULAR NAME | ENGINE DATA               | DEPARTMENT | DESCRIPTION  |
|----------|---------------------|--------------|---------------------------|------------|--|
| ZUGM-73A | LOCKHEED            | NONE         | 2                         | NAVY       | <b>INERTIALLY</b> GUIDED, SOLID PROPELLANT SLBM. REFERRED TO UNOFFICIALLY AS POSEIDON.   |
| MQM-74A  | NORTHROP            | NONE         | 1 YF-400-WR-400           | NAVY       | RECOVERABLE, REMOTELY CONTROLLED, GUNNERY TARGET LAUNCHED BY JATO FROM SHIP AND SHORE BASED LAUNCHER.  |
| MQM-74B  | NORTHROP            | NONE         | 1 YJ-400-WR-40            | NAVY       | UPGRADED <b>MQM-74A</b> .  |
| BQM-74C  | NORTHROP            | NONE         | 1 YJ400-WR402             | NAVY       | <b>MQM-74C</b> MODIFIED FOR SURFACE AND AIR LAUNCH CAPABILITY.   |
| MQM-74C  | NORTHROP            | NONE         | 1 WR-24-7                 | NAVY       | UPGRADED <b>MQM-74B</b> .  |
| BQM-74D  | NORTHROP            | NONE         | 1 WR-24-7                 | ARMY       | <b>MQM-74C MODIFIED</b> FOR LAND OR WATER RECOVERY, PRECISION NAVIGATION AND SENSORS FOR TARGET ACQUISITION AND BATTLEFIELD SURVEILLANCE.                              |
| BQM-74 E | NORTHROP            | NONE         | 1 J400-WR-404<br>TURBOJET | NAVY       | SUBSCALE, SUBSONIC AERIAL TARGET DRONE WHICH CAN BE SURFACE OR AIR LAUNCHED, RECOVERED ON LAND OR WATER, AND IS CONTROLLED FROM THE <b>GROUND</b> OR IS PREPROGRAMMED. |
| AGM-78A  | GENERAL<br>DYNAMICS | STANDARD ARM | 1 MK27 MOD 4              | N A V Y    | TACTICAL, ANT <b>I-RADIATION</b> MISSILE WITH SMOKE DEVICE.  |
| ATM-78A  | GENERAL<br>DYNAMICS | STANDARD ARM |                           | NAVY       | TRAINING <b>AGM-78A</b> .  |
| AGM-78B  | GENERAL<br>DYNAMICS | STANDARD ARM | 1 MK27 MOD 4              | NAVY       | UPGRADED <b>AGM-78A</b> .  |





MISSILE SERIES (CONTINUED)

| MDS      | MANUFACTURER            | POPULAR NAME | ENGINE DATA     | DEPARTMENT | DESCRIPTION   |
|----------|-------------------------|--------------|-----------------|------------|---|
| ATM-78B  | GENERAL DYNAMICS        | STANDARD ARM | 1 MK27 MOO 2/3  | NAVY       | TRAINING AGM-78B USED FOR CAPTIVE FLIGHT AND CLASSROOM INSTRUCTION.                                       |
| AGM-78C  | GENERAL DYNAMICS        | STANDARD ARM | 1 MK27 MOO 4    | AF/NAVY    | UPGRADED AGM-78C.   |
| ATM-78C  | GENERAL DYNAMICS        | STANDARD ARM | 1 MK69 MOO 0    | AF/NAVY    | TYPE 111 TRAINING AGM-78C USED FOR CAPTIVE FLIGHT AND CLASSROOM TRAINING.                                 |
| AGM-78D  | GENERAL DYNAMICS        | STANDARD ARM | 1 MK69 MOD 0    | AF/NAVY    | UPGRADED AGM-78C.   |
| ATM-78D  | GENERAL DYNAMICS        | STANDARD ARM | 1 MK69 MOO 0    | NAVY       | TYPE 111 TRAINING AGM-78D FOR CAPTIVE FLIGHT AND CLASSROOM TRAINING.                                      |
| XQM-81 A | BEECH                   | FIREBOLT     | 1               | AF         | SUPERSONIC, HIGH ALTITUDE, TARGET MISSILE USED WITH F-4C AIRCRAFT.  |
| AQM-81 B | TELEOYNE RYAN           | FIREBOLT     | 1               | NAVY       | AQM-81 A MODIFIED WITH NAVY INTEGRATED TARGET CONTROL SYSTEM AND PARACHUTE RECOVERY AND FLOTATION SYSTEM. |
| AGM-83A  | TEXAS INSTRUMENT & NWCL | BULLDOG      | 1 LR58-RM-4     | NAVY       | AGM-12A MODIFIED AS AIR-TO-SURFACE, SEMI-ACTIVE MISSILE.  |
| ATM-83A  | NAVAL WEAPONS CENTER    | BULLDOG      | 1 MK8 MOO 2     | NAVY       | TRAINING AGM-83A.   |
| AGM-84A  | MCDONNELL DOUGLAS       | HARPOON      | 1 XJ-402-CA-400 | NAVY/AF    | AIR-TO-SURFACE GUIDED MISSILE DESIGNED TO DESTROY SHIP TARGETS.   |

# MISSILE SERIES (CONTINUED)

| MDS      | MANUFACTURER         | POPULAR NAME | ENGINE DATA     | DEPARTMENT | DESCRIPTION   |
|----------|----------------------|--------------|-----------------|------------|---|
| ATM-84A  | MCDONNELL<br>DOUGLAS | HARPOON      | 1 XJ-402-CA-400 | NAVY       | TRAINING ZAGM-84A.  |
| RGM-84A  | MCDONNELL<br>DOUGLAS | HARPOON      | 1 XJ-402-CA-400 | NAVY       | AGM-84A MODIFIED FOR SHIPBOARD LAUNCH.  |
| RTM-84A  | MCDONNELL<br>DOUGLAS | HARPOON      | 1 XJ-402-CA-400 | NAVY       | TRAINING VERSION OF THE RGM-84A.  |
| UGM-84A  | MCDONNELL<br>DOUGLAS | HARPOON      | 1 XJ-402-CA-400 | NAVY       | RGM-84A CONTAINED IN CAPSULE DESIGNED FOR UNDERWATER LAUNCH TO ATTACK SURFACE TARGET. |
| UTM-84A  | MCDONNELL<br>DOUGLAS | HARPOON      | 1 XJ-402-CA-400 | NAVY       | TRAINING VERSION OF THE UGM-84A.  |
| ZAGM-84A | MCDONNELL<br>DOUGLAS | HARPOON      | 1 XJ-402-CA-400 | NAVY       | SURFACE-TO-SURFACE GUIDED MISSILE DESIGNED TO DESTROY LAND AND SEA TARGETS.           |
| AGM-84B  | MCDONNELL<br>DOUGLAS | HARPOON      | 1 XJ-402-CA-400 | NAVY/UK    | AGM-84A MODIFIED FOR UNITED KINGDOM UNDERWATER LAUNCH AND ATTACK.                     |
| ATM-84B  | MCDONNELL<br>DOUGLAS | HARPOON      | 1 XJ-402-CA-400 | NAVY       | TRAINING VERSION OF THE AGM-84B.  |
| RGM-84B  | MCDONNELL<br>DOUGLAS | HARPOON      | 1 XJ-402-CA-400 | NAVY       | RGM-84A MODIFIED FOR UNITED KINGDOM UNDERWATER LAUNCH AND ATTACK.                     |
| RTM-84B  | MCDONNELL<br>DOUGLAS | HARPOON      | 1 XJ-402-CA-400 | NAVY       | TRAINING VERSION OF THE RGM-84B.  |





| MISSILE SERIES (CONTINUED) |                      |              |                 |            |   |
|----------------------------|----------------------|--------------|-----------------|------------|---|
| MDS                        | MANUFACTURER         | POPULAR NAME | ENGINE DATA     | DEPARTMENT | DESCRIPTION   |
| UGM-84B                    | MCDONNELL<br>DOUGLAS | HARPOON      | 1 XJ-402-CA-400 | NAVY       | UGM-84A MODIFIED FOR UNITED KINGDOM UNDERWATER LAUNCH AND ATTACK.   |
| UTM-84B                    | MCDONNELL<br>DOUGLAS | HARPOON      | 1 XJ-402-CA-400 | NAVY       | TRAINING VERSION OF THE UGM-84B.  |
| AGM-84C                    | MCDONNELL<br>DOUGLAS | HARPOON      | 1 XJ-402-CA-400 | NAVY       | AGM-84A MODIFIED FOR LOWER ALTITUDE MID-COURSE PROFILE AND SEA SKIM TERMINAL TRAJECTORY.                          |
| ATM-84C                    | MCDONNELL<br>DOUGLAS | HARPOON      | 1 XJ-402-CA-400 | NAVY       | TRAINING VERSION OF THE AGM-84C.  |
| RGM-84C                    | MCDONNELL<br>DOUGLAS | HARPOON      | 1 XJ-402-CA-400 | NAVY       | RGM-84A MODIFIED FOR LOWER ALTITUDE MID-COURSE PROFILE AND SEA SKIM TERMINAL TRAJECTORY.                          |
| RTM-84C                    | MCDONNELL<br>DOUGLAS | HARPOON      | 1 XJ-402-CA-400 | NAVY       | TRAINING VERSION OF THE RGM-84C.  |
| UGM-84C                    | MCDONNELL<br>DOUGLAS | HARPOON      | 1 XJ-402-CA-400 | NAVY       | UGM-84A MODIFIED FOR LOWER ALTITUDE MID-COURSE PROFILE AND SEA SKIM TERMINAL TRAJECTORY.                          |
| UTM-84C                    | MCDONNELL<br>DOUGLAS | HARPOON      | 1 XJ-402-CA-400 | NAVY       | TRAINING VERSION OF THE UGM-84C.  |
| AGM-84D                    | MCDONNELL<br>DOUGLAS | HARPOON      | 1 XJ-402-CA-400 | NAVY       | AGM-84C MODIFIED FOR INCREASED RANGE, MID-COURSE WAY POINTS AND SELECTABLE (SEA SKIM/POP-UP) TERMINAL TRAJECTORY. |
| ATM-84D                    | MCDONNELL<br>DOUGLAS | HARPOON      | 1 XJ-402-CA-400 | NAVY       | TRAINING VERSION OF THE AGM-84D.  |

MISSILE SERIES (CONTINUED)

| MDS       | MANUFACTURER              | POPULAR NAME | ENGINE DATA     | DEPARTMENT | DESCRIPTION   |
|-----------|---------------------------|--------------|-----------------|------------|---|
| RGM-84D   | MCDONNELL<br>DOUGLAS      | HARPOON      | 1 XJ-402-CA-400 | NAVY       | RGM-84C MODIFIED FOR INCREASED RANGE, MID-COURSE WAY POINTS AND SELECTABLE (SEA SKIM/POP-UP) <del>TERMINAL</del> TRAJECTORY . |
| RTM-84D   | MCDONNELL<br>DOUGLAS      | HARPOON      | 1 XJ-402-CA-400 | NAVY       | TRAINING VERSION OF THE RGM-84D.  |
| UGM-84D   | MCDONNELL<br>DOUGLAS      | HARPOON      | 1 XJ-402-CA-400 | NAVY       | UGM-84C MODIFIED FOR INCREASED RANGE, MID-COURSE WAY POINTS AND SELECTABLE (SEA SKIM/POP-UP) TERMINAL TRAJECTORY.             |
| UTM-84D   | MCDONNELL<br>DOUGLAS      | HARPOON      | 1 XJ-402-CA-400 | NAVY       | TRAINING VERSION OF THE UGM-84D.  |
| CATM-84D  | NAVAL ORDNANCE<br>STATION | HARPOON      |                 | NAVY       | CAPTIVE CARRY INERT TRAINER FOR AGM-84D MISSILE.  |
| NAEM-84D  | NAVAL ORDNANCE<br>STATION | HARPOON      |                 | NAVY       | PERMANENT RECOVERABLE TELEMETRIC JETTISON TEST VEHICLE FOR AGM-84D.   |
| AGM-84E   | MCDONNELL<br>DOUGLAS      | HARPOON      | 1 XJ-402-CA-400 | NAVY       | AIR-LAUNCHED STRIKE WEAPON FOR USE BY CARRIER AIRCRAFT AGAINST LAND TARGETS, SHIPS AT PORT, AND SHIPS AT SEA.                 |
| ATM-84 E  | MCDONNELL<br>DOUGLAS      | HARPOON      | 1 XJ-402-CA-400 | NAVY       | TRAINING VERSION OF THE AGM-84E.  |
| DATM-84 E | NAVAL ORDNANCE<br>STATION | HARPOON      |                 | NAVY       | DUMMY INERT TRAINER FOR AGM-84E MISSILE.  |





MISSILE SERIES (CONTINUED)

| DS                  | MANUFACTURER                         | POPULAR NAME | ENGINE DATA              | DEPARTMENT         | DESCRIPTION   |
|---------------------|--------------------------------------|--------------|--------------------------|--------------------|---|
| AEM-84E             | NAVAL ORDNANCE<br>STATION            | HARPOON      |                          | NAVY               | PERMANENT RECOVERABLE TELEMETRIC JETTISON TEST VEHICLE FOR <b>AGM-84E</b> .   |
| RI M-85A            | TBO                                  | NONE         |                          | NAVY               | MEDIUM RANGE, SURFACE-TO-AIR, ALL-WEATHER MISSILE FOR USE AGAINST ATTACK AIRCRAFT, MISSILES, AND SURFACE TARGET.        |
| <del>SM-86B</del>   | BOEING                               | NONE         | 1 F-107-WR-100           | AF                 | AIR- LAUNCHED, SUBSONIC, TERRAIN <del>FOLLOWING</del> , CRUISE MISSILE (ALCM) .   |
| <del>SM-86C</del>   | BOEING                               | NONE         | 1 F- 107-WR- 100         | AF                 | <del>AGM-86B</del> MODIFIED FOR CONVENTIONAL USE (ALCM) .   |
| <del>SM-87A</del>   | NAVAL WPNS CTR &<br>GENERAL ELECTRIC | FOCUS I      | 1 <del>MK17</del> MOD 5  | NAVY               | CLASSIFIED MISSILE.   |
| <del>AGM-88A</del>  | NAVAL WEAPONS<br>CENTER              | HARM         | 1 <del>SR-113-TC-1</del> | <del>AF/NAVY</del> | ANTI -RADIATION, HIGH VELOCITY, AIR-LAUNCHED, <b>GUIDED</b> MISSILE <del>USED</del> AGAINST SURFACE RADAR INSTALLATION. |
| ATM-88A             | NAVAL WEAPONS<br>CENTER              | HARM         | 1 TSR-113 -TC-1          | <b>AF/NAVY</b>     | <b>TRAINING AGM-88A.</b>  |
| CATM-88A            | TEXAS<br>INSTRUMENT                  | HARM         | 1 TSR-113 -TC-1          | <b>AF/NAVY</b>     | CAPTIVE, AIR TRAINING VERSION OF THE <b>AGM-88A</b> .   |
| <del>DATM-88A</del> | TEXAS<br>INSTRUMENT                  | HARM         | 1 TSR-113 -TC-1          | AF/NAVY            | MECHANICAL MODEL OF THE <del>AGM-88A</del> USED FOR TRAINING LOADING CREWS.   |
| <b>AGM-88B</b>      | NAVAL WEAPONS<br>CENTER              | HARM         | 1 <b>SR-113-TC-1</b>     | <b>AF/NAVY</b>     | <b>AGM-88A</b> MODIFIED WITH IMPROVED TACTICAL SOFTWARE, IMPROVED ELINT SOFTWARE AND <b>REPROGRAMMABLE</b> MEMORY.      |

MISSILE SERIES (CONTINUED)

| Mos             | MANUFACTURER                       | POPULAR NAME | ENGINE DATA     | DEPARTMENT     | DESCRIPTION   |
|-----------------|------------------------------------|--------------|-----------------|----------------|---|
| <b>CATM-88B</b> | TEXAS<br>INSTRUMENT                | HARM         |                 | <b>AF/NAVY</b> | CAPTIVE, AIR TRAINING VERSION OF THE <b>AGM-88B</b> .   |
| <b>DATM-88B</b> | TEXAS<br>INSTRUMENT                | HARM         | 1 TSR-113 -TC-1 | AF/NAVY        | MECHANICAL <b>MODEL</b> OF <b>AGM-88B</b> & <b>AGM-88C</b> - 1 USED FOR CREW TRAINING FOR REPROGRAMMING SIMULATION.   |
| <b>AGM-88C</b>  | TEXAS INSTRUMENT<br>FORO AEROSPACE | HARM         | 1 SOLID         | NAVY           | <b>IMPROVED GUIDANCE</b> SECTION WITH NEW OPERATIONAL CAPABILITIES AGAINST THE LATEST THREATS.  |
| <b>CATM-88C</b> | TEXAS<br>INSTRUMENTS               |              | 1 TSR-113 -TC-1 | <b>AF/NAVY</b> | CAPTIVE AIR TRAINING VERSION OF THE AIR-TO-SURFACE <b>AGM-88C</b> WITH INERT ROCKET MOTOR AND WARHEAD.  |
| <b>ZBQM-90A</b> | TBO                                | NONE         |                 | NAVY           | REMOTELY CONTROLLED, HIGH <b>ALTITUDE</b> , SUPERSONIC, AERIAL TARGET .   |
| <b>AQM-91A</b>  | RYAN                               | NONE         | 1 J97           | AF             | NONE.   |
| <b>FIM-92A</b>  | GENERAL<br><b>DYNAMICS</b>         | STINGER      |                 | ARMY           | PORTABLE, <b>SHOULDER-FIRED</b> WEAPON WITH MISSILE THAT USES <b>INFRARED</b> SEEKER AND ELECTRO-MECHANICAL GUIDANCE TO HOME ON <b>LOW</b> FLYING AIRCRAFT. |
| <b>XFIM-92B</b> | GENERAL<br><b>DYNAMICS</b>         | STINGER      |                 | ARMY           | PROTOTYPE UPGRADE OF <b>FIM-92A</b> .   |
| <b>FIM-92C</b>  | GENERAL<br>DYNAMICS                | STINGER      | <b>1</b>        | ARMY           | <b>FIM-92A</b> WITH <b>UV</b> SEEKER.   |
| <b>FIM-92D</b>  | GENERAL<br>DYNAMICS                | STINGER      | <b>1</b>        | ARMY           | <b>FIM-92C</b> MODIFIED WITH IMPROVED COUNTERMEASURES.  |

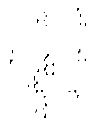


MISSILE SERIES (CONTINUED)

| MDS       | MANUFACTURER           | POPULAR NAME        | ENGINE DATA                          | DEPARTMENT | DESCRIPTION  |
|-----------|------------------------|---------------------|--------------------------------------|------------|--|
| XGQM-93A  | LTV ELECTRO<br>SYSTEMS | NONE                | 1 PT6A                               | AF         | REMOTELY <b>PILOTED</b> VEHICLE.   |
| YGQM-94A  | BOEING                 | NONE                | 1 J97                                | AF         | HIGH ALTITUDE, LONG ENDURANCE RPV FOR PHOTO/ELECTRONIC<br>RECONNAISSANCE, TARGET IDENTIFICATION COMMUNICATION RELAY<br>OR WEATHER SURVEILLANCE. PROTOTYPE. |
| YGQM-94B  | BOEING                 | NONE                | 1 TF34-GE                            | AF         | UPGRADED <b>YGQM-94A</b> .   |
| AIM-95A   | TBO                    | AGILE               |                                      | NAVY       | SHORT-RANGE, AIR-TO-AIR MISSILE FOR AERIAL COMBAT.   |
| UGM-96A   | <b>LOCKHEED</b>        | TRIDENT             |                                      | NAVY       | LONG-RANGE SLBM.   |
| XAIM-97A  | TBD                    | NONE                | 1 mk27 MOD 4                         | AF         | CLASSIFIED EXPERIMENT.   |
| YGQM-98A  | TELEDYNE<br>RYAN       | NONE                | 1 YF-104                             | AF         | CLASSIFIED PROTOTYPE.  |
| RIM-101A  | TBO                    | NONE                |                                      | NAVY       | SURFACE-TO-AIR WEAPON FOR SHIPBOARD USE. LAUNCHED FROM TUB<br>BY SOLID PROPELLANT EJECTOR. PASSIVE I-BAND RF AND<br>PASSIVE <b>IR GUI DANCE</b> .          |
| PQM-102A  | GENERAL<br>DYNAMICS    | DELTA <b>DAGGER</b> | 1 <b>J57-P/</b> F-23/23A             | AF         | DRONE VERSION OF QF-102A.  |
| PQM-102B  | GENERAL<br>DYNAMICS    | DELTA <b>DAGGER</b> | 1 <b>J57-P/F-23/-23A</b><br>P&W FORO | AF         | DRONE VERSION OF QF-102B.  |
| XAQM-103A | RYAN                   | NONE                | 1 <b>T69-T-41A</b>                   | AF         | MODIFIED RYAN 147G HIGH ALTITUDE DRONE IN RPV TEST BED<br>CONFIGURATION. AIR- <b>LAUNCHED</b> FROM DC-130 AND RECOVERED BY<br>MID AIR RETRIEVAL SYSTEM.    |

MISSILE SERIES (CONTINUED)

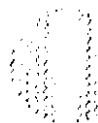
| MDS       | MANUFACTURER                | POPULAR NAME | ENGINE DATA          | DEPARTMENT | DESCRIPTION  |
|-----------|-----------------------------|--------------|----------------------|------------|--|
| MIM-104A  | MARTIN                      | PATRIOT      | 1 TX-486-1           | ARMY       | PRODUCT ION XMI M-1 04A.   |
| XM1M-104A | USAMICOM                    | PATRIOT      | 1 TX-486-1           | ARMY       | AIR DEFENSE MISSILE/STORED IN LAUNCH TUBE.   |
| MIM-104B  | USAMICOM                    | PATRIOT      | 1 TX-486-1           | ARMY       | MIM-104A MODIFIED WITH IMPROVED CAPABILITY AGAINST STAND-OFF AND SELF SCREENING JAMMERS.   |
| MIM-104C  | USAMICOM                    | PATRIOT      | 1 TX-486-1           | ARMY       | MIM-104B MODIFIED WITH IMPROVED SYSTEMS CAPABILITY AGAINST TACTICAL BALLISTIC MISSILES.  |
| M1M-104D  | RAYTHEON                    | PATRIOT      | 1 TX-486-1           | ARMY       | MIM-104C MODIFIED TO PROVIDE IMPROVED DETECTION OF TARGETS WITH REDUCED CROSS SECTION AND ENHANCED LETHALITY.  |
| YMQM-105A | LOCKHEED                    | AQUILA       | 1 DYAO 240-B         | ARMY       | SMALL, HYDRAULICALLY-LAUNCHED, DELTA WING PUSHER-PROPELLER-DRIVEN MISSILE. TARGET ACQUISITION THROUGH TELEVISION, LASER RANGE FINDER, AND LASER DESIGNATOR SENSORS. PROTOTYPE. |
| XBQM-106A | DIGITAL DESIGN INCORPORATED | NONE         | 1 HERBRANSON DYAD220 | AF         | MODIFIED XBQM-106.   |
| XNQM-106A | AF FLIGHT DYNAMICS LAB      | NONE         | 1                    | AF         | EXPERIMENTAL TACTICAL RPV.   |
| XBQM-106B | AF FLIGHT DYNAMICS LAB      | NONE         | 1 HERBRANSON DYAD220 | AF         | MODIFIED XBQM-106A.  |
| XBQM-106C | AF FLIGHT DYNAMICS LAB      | NONE         | 1 HERBRANSON DYAD220 | AF         | MODIFIED XBQM-106B.  |





| MISSILE SERIES [CONTINUED] |                  |              |                        |            |   |
|----------------------------|------------------|--------------|------------------------|------------|---|
| MDS                        | MANUFACTURER     | POPULAR NAME | ENGINE DATA            | DEPARTMENT | DESCRIPTION   |
| MQM- 107A                  | USAMICOM         | STREAKER     | 1 J402-CA-700          | ARMY       | REMOTELY CONTROLLED. VARIABLE SPEED, RECOVERABLE; GUNNERY TARGET ORONE. GROUND LAUNCH WITH JATO ASSIST.           |
| MQM- 107B                  | USAMICOM         | STREAKER     | 1 J402-CA-700          | AF         | AF VERSION OF MQM-107A.   |
| MQM-107C                   | BEECH            | STREAKER     | 1 J402-CA-700          | AF         | IMPROVED VERSION OF MQM-107A WITH PROVISIONS FOR MANEUVERING AUTOPILOT INSTALLATION.                              |
| MQM- 107D                  | USAMICOM         | STREAKER     | 1 J402-CA-702          | AF/ARMY    | IMPROVED MQM-107B WITH LOWER COST ENGINES.  |
| MQM-107E                   | USAMICOM         | STREAKER     | 1 J402-CA-702          | AF/ARMY    | IMPROVED MQM-107C WITH LOWER COST ENGINES.  |
| XBQM- 108A                 | TBD              | NONE         | 1 CAEX<br>J-402-CA-400 | NAVY       | VERTICAL TAKE-OFF AND LANDING ORONE WITH LOW DELTA WEIGHT/CANARD. EXPERIMENTAL.                                   |
| BGM-109A                   | GENERAL DYNAMICS | TOMAHAWK     | 1 F107-400             | NAVY       | GROUND LAUNCHED CRUISE MISSILE (GLCM) LAND ATTACK VERSION.  |
| BGM-109B                   | GENERAL DYNAMICS | TOMAHAWK     | 1 F107-400             | AF         | ANTI-SHIP VERSION BGM-109A.   |
| BGM-109C                   | GENERAL DYNAMICS | TOMAHAWK     | 1 F107-400             | NAVY       | BGM-109B CONFIGURE FOR GROUND LAUNCH AND USING AN/DSW-15(V) GUIDANCE SYSTEM.                                      |
| RGM-109E                   | HUGHES           | TOMAHAWK     | 1 J402-CA-401          | NAVY       | SHIP-LAUNCHED, CONVENTIONALLY WARHEADED, LAND ATTACK OR ANTI-SHIP WEAPON WITH A UNITARY WARHEAD (WDU-36/B).       |
| UGM-109E                   | HUGHES           | TOMAHAWK     | 1 J402-CA-401          | NAVY       | UNDERWATER LAUNCHED, CONVENTIONALLY WARHEADED, LAND ATTACK OR ANTI-SHIP WEAPON WITH A UNITARY WARHEAD (WDU-36/B). |

| MISSILE SERIES (CONTINUED) |                           |              |                |            |  |
|----------------------------|---------------------------|--------------|----------------|------------|--|
| MDS                        | MANUFACTURER              | POPULAR NAME | ENGINE DATA    | DEPARTMENT | DESCRIPTION  |
| BGM-109G                   | GENERAL DYNAMICS          | GRIFFIN      | 1 F107-400     | AF         | AIR FORCE VERSION OF GLCM LAUNCHED FROM TRANSPORTER ERECTOR LAUNCHER (TEL).  |
| AGM-109H                   | GENERAL DYNAMICS          | TOMAHAWK     | 1 J402-CA-401  | AF         | MEDIUM-RANGE, AIR-LAUNCHED, AIRFIELD ATTACK CRUISE MISSILE WITH CONVENTIONAL WARHEAD (TACTICAL AIRFIELD ATTACK MUNITIONS) .  |
| RGM-109H                   | HUGHES                    | TOMAHAWK     | 1 J402-CA-401  | NAVY       | SHIP-LAUNCHED, CONVENTIONALLY WARHEAD, LAND ATTACK OR ANTI-SHIP WEAPON WITH A TOMAHAWK HARD TARGET PENETRATOR WARHEAD.       |
| UGM-109H                   | HUGHES                    | TOMAHAWK     | 1 J402-CA-401  | NAVY       | UNDERWATER LAUNCHED, CONVENTIONALLY WARHEAD, LAND ATTACK OR ANTI-SHIP WEAPON WITH A TOMAHAWK HARD TARGET PENETRATOR WARHEAD. |
| AGM-109K                   | GENERAL DYNAMICS          | TOMAHAWK     | 1 J402-CA-401  | AF         | MEDIUM-RANGE, AIR-LAUNCHED, LAND ATTACK AND SEALAND CONTROL CRUISE MISSILE WITH CONVENTIONAL WARHEAD (WDU-25A/B) .           |
| AGM-109L                   | GENERAL DYNAMICS          | TOMAHAWK     | 1 J402-CA-4401 | NAVY       | MEDIUM-RANGE, AIR-LAUNCHED, LAND/SEA ATTACK CRUISE MISSILE WITH CONVENTIONAL WARHEAD (WDU-7B) ,                              |
| XRIM-113A                  | NAVAL SURFACE WPNS CENTER | NONE         |                | NAVY       | ANTI-CRUISE MISSILE SURFACE-TO-AIR DEFENSE (EXPERIMENTAL) .  |
| AGM-114A                   | ROCKWELL                  | HELLFIRE     | 1 TX-657       | ARMY       | HELICOPTER-LAUNCHED ANTI-ARMOR MISSILE EQUIPPED WITH TERMINAL HOMING SEEKER AND SHAPED CHARGE WARHEAD.                       |
| YAGM-114A                  | ROCKWELL                  | HELLFIRE     | 1 TX-657       | ARMY       | PROTOTYPE AGM-114A,  |







MISSILE SERIES (CONTINUED)

| MDS        | MANUFACTURER       | POPULAR NAME | ENGINE DATA | DEPARTMENT | DESCRIPTION  |
|------------|--------------------|--------------|-------------|------------|--|
| AGM-114B   | ROCKWELL           | HELLFIRE     | 1 13202500  | NAVY /MARN | HELICOPTER-LAUNCHED HEAT MISSILE EQUIPPED WITH TERMINAL HOMING/GUIDANCE <b>PROVIDED</b> BY THREE DIFFERENT SEEKER <b>MODULES</b> . MINIMUM SMOKE MOTOR. SAFE ARM <b>DEVICE</b> .   |
| YAGM- 114B | ROCKWELL           | HELLFIRE     | 1 T773-3    | NAVY       | NAVY VERSION OF <b>AGM-114A</b> . MODIFICATION <b>INCLUDES</b> SAFE ARMING DEVICE ( <b>SAD</b> ).  |
| AGM-114C   | ROCKWELL           | HELLFIRE     | 1 M120E1    | ARMY       | SAME AS <b>AGM-114B</b> , EXCEPT NO SAFE ARM <b>DEVICE</b> .   |
| AGM-1 140  | USAMI COM          | HELLFIRE     | 1 M120E1    | ARMY       | <b>AGM-114C</b> MODIFIED WITH DIGITAL AUTOPILOT.   |
| AGM-114E   | USAMI COM          | HELLFIRE     | 1 T773-3    | NAVY       | <b>AGM-114B</b> MODIFIED WITH <b>DIGITAL</b> AUTOPILOT.  |
| AGM-114F   | ROCKWELL           | HELLFIRE     | 1 M120E1    | ARMY       | <b>AGM-114C</b> MODIFIED TO <b>INCLUDE</b> ENHANCED WARHEAD FOR PENETRATION OF ARMORED TARGETS WITH REACTIVE ARMOR.  |
| AGM-1 14G  | ROCKWELL           | HELLFIRE     | 1 T773-3    | ARMY       | <b>AGM-114B</b> MODIFIED TO <b>INCLUDE</b> ENHANCED WARHEAD FOR PENETRATION OF ARMORED TARGETS WITH REACTIVE ARMOR. ALSO <b>INCLUDES</b> SAFE ARM DEVICE.  |
| AGM-114H   | ROCKWELL           | HELLFIRE     | 1 M120E1    | ARMY       | <b>AGM-114F</b> MODIFIED BY REPLACING CURRENT ANALOG AUTOPILOT WITH <b>REPROGRAMMABLE</b> DIGITAL <b>GUIDANCE</b> SUBSYSTEM.   |
| AGM- 1 14J | PARTIN<br>MARIETTA | HELLFIRE     |             | ARMY       | ARMY VARIANT OF HELLFIRE MISSILE SYSTEM. MODS <b>INCLUDE</b> IMPROVEMENTS TO GUIDANCE, PROPULSION, WARHEAD, AND CONTROL SECTIONS, SPECIAL FEATURES <b>INCLUDE</b> TRIPLE WARHEAD WITH ELECTRONIC ARM/FIRE AND COUNTERMEASURES HARDENED SEEKER. |
| AGM-114K   | MARTIN<br>MARIETTA | HELLFIRE     |             | NAVY       | NAVY VARIANT OF HELLFIRE MISSILE SYSTEM. <b>AGM-114J</b> WITH SAFE/ARM FEATURE FOR ROCKET MOTOR.   |

# MISSILE SERIES (CONTINUED)

| MDS       | MANUFACTURER                    | POPULAR NAME | EN NE DATA            | DEPARTMENT | DESCRIPTION  |
|-----------|---------------------------------|--------------|-----------------------|------------|--|
| AGM-114L  | MARTIN MARIETTA<br>WESTINGHOUSE | HELLFIRE     |                       | ARMY       | AGM-114H MODIFIED WITH A FIRE AND FORGET SENSOR.   |
| XMIM-115A | USAMICOM                        | US ROLAND    |                       | ARMY       | ALL-WEATHER, AERODYNAMICALLY MANEUVERABLE,<br>COMMAND-TO-LINE-OF-SIGHT, GUIDED MISSILE. OPTICALLY OR<br>RADAR TRACKED. EXPERIMENTAL. |
| XRIM-116A | RA                              | NONE         |                       | NAVY       | EXPERIMENTAL SURFACE-TO-AIR MISSILE FOR ANTI-SHIP MISSILE<br>DEFENSE.  |
| XRTM-116A | GENERAL<br>DYNAMICS             | NONE         | 1 EX 1 MOD 0          | NAVY       | TRAINING VERSION OF THE XRM-116A MISSILE.  |
| FQM-117A  |                                 | NONE         | 1 0.61                | ARMY       | USED FOR TARGET TRAINING.  |
| FQM-117B  | RS SYSTEMS                      | NONE         | 1 0.61                | ARMY       | ONE-NINTH SCALE TARGET OF A SOVIET MIG-27.   |
| FQM-117C  | RS SYSTEMS                      | NONE         | 1 0.61                | ARMY       | ONE-NINTH SCALE TARGET OF AN F-16.   |
| LGM-118A  | MARTIN<br>MARIETTA              | PEACEKEEPER  | 4 3 SOLID<br>1 LIQUID | AF         | ICBM WITH MIRV WARHEAD. FORMERLY KNOWN AS MX.  |
| MGM-118A  | MARTIN<br>MARIETTA              | PEACEKEEPER  | 4 3 SOLID<br>1 LIQUID | AF         | MOBILE LAUNCHED VERSION OF THE PEACEKEEPER TRANSPORTED AND<br>STORED ON TRAINS.  |
| AGM-119A  | KONGSBERG<br>NORWAY             | PENGUIN      | 1 P/N 38441507        | AF/NATO    | REPROGRAMMED TRAJECTORY MISSILE WITH PASSIVE IR SEEKER<br>GUIDANCE.  |
| AGM-119B  | NORSK<br>FORSVARSTEKNOLOG       | PENGUIN      | 1 SOLID               | NAVY       | AGM-119A MODIFIED WITH DIFFERENT WARHEAD, FUZE, FUZE<br>BOOSTER, ROCKET MOTOR USED FOR HELICOPTER LAUNCHING.                         |

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MISSILE SERIES (CONTINUED)

| MDS       | MANUFACTURER                  | POPULAR NAME | ENGINE DATA                     | DEPARTMENT | DESCRIPTION  |
|-----------|-------------------------------|--------------|---------------------------------|------------|--|
| CATM-119B | NAVSURUARCENOV<br>INDIAN HEAD | PENGUIN      | 1 BALLASTED DUMMY               | NAVY       | CAPTIVE CARRY INERT TRAINING VERSION OF THE AGM-119B.  |
| AIM-120A  | HUGHES                        | NONE         | 1                               | AF/NAVY    | ADVANCED MEDIUM-RANGE AIR-TO-AIR MISSILE (AMRAAM) USED ON FIGHTER AIRCRAFT FOR BEYOND VISUAL RANGE COMBAT. |
| CATM-120A | HUGHES                        | NONE         |                                 | AF/NAVY    | LOAD TRAINING CAPTIVE CARRY VERSION OF AIM-120A.   |
| DATM-120A | HUGHES                        | NONE         |                                 | AF/NAVY    | EOD TRAINING VERSION OF AIM-120A.  |
| YAIM-120A | HUGHES                        | NONE         | 1                               | AF/NAVY    | PROTOTYPE AIM-120A.  |
| AIM-120B  | HUGHES/<br>RAYTHEON           | NONE         | 1 SOLID ROCKET                  | AF/NAVY    | IMPROVED VERSION OF AIM-120A.  |
| CATM-120B | HUGHES                        | NONE         | N/A                             | AF/NAVY    | INERT VERSION OF AIM-120B FOR LOADING AND CAPTIVE CARRY TRAINING.  |
| AIM-120C  | HUGHES/<br>RAYTHEON           | NONE         | 1 SOLID ROCKET                  | AF/NAVY    | COMPRESSED CARRIAGE VERSION OF AIM-120B.   |
| CATM-120C | HUGHES                        | NONE         | N/A                             | AF/NAVY    | INERT VERSION OF AIM-120C FOR LOADING AND CAPTIVE CARRY TRAINING.  |
| YCQM-121A | BOEING                        | NONE         | 1 CUYUNA EAGLE<br>2 CYCLE RECIP | AF         | SINGLE, SURFACE-TO-SURFACE, MEDIUM RANGE, ATTACK MISSILE.  |
| YCGM-121B | BOEING                        | NONE         | 2 CYCLE/28 H.P.                 | AF         | PROTOTYPE MINI-DRONE, EMITTER ATTACK, AUTONOMOUS WEAPON SYSTEM FOR THE SUPPRESSION OF ENEMY AIR DEFENSES.  |

MISSILE SERIES (CONTINUED)

| MDS       | MANUFACTURER                | POPULAR NAME | ENGINE DATA         | DEPARTMENT | DESCRIPTION  |
|-----------|-----------------------------|--------------|---------------------|------------|--|
| AGM-122A  | NAVAL WEAPONS CENTER        | NONE         | 1 MK-36 MOD 11      | NAVY       | AIR-TO-SURFACE MISSILE DESIGNED TO ATTACK ENEMY RADAR DIRECTED AIR DEFENSE SYSTEM.   |
| ATM-122A  | NAVAL WEAPON STN SEAL BEACH | NONE         | 1 MK36 MOD12        | USMC       | AIR-TO-GROUND MISSILE USED IN FLEET WEAPON TRAINING EXERCISES.   |
| CATM-122A | MOTOROLA INC.               | NONE         | NONE                | NAVY       | AIR TRAINING VERSION OF THE AGM-122A.  |
| AGM-122B  | TBD                         | NONE         | 1 MK36 MOD 8/MOD 10 | NV/MC      | AGM-122A WITH A NEWLY DEVELOPED GUIDANCE CONTROL SYSTEM WHICH INCORPORATES ELECTRICALLY ERASABLE PROGRAMMABLE READ ONLY MEMORY BOARDS.       |
| CATM-122B | TBD                         | NONE         |                     | USMC       | CAPTIVE AIR TRAINING VERSION OF THE AGM-122B.  |
| AGM-123A  | NAVAL WEAPONS CENTER        | NONE         | 1 WPU-5/B           | NAVY       | LASER GUIDED MISSILE.  |
| AGM-123B  | TEXAS INSTRUMENT            | NONE         | 1 WPU-5/B           | NAVY       | LASER GUIDED AIR-TO-SURFACE MISSILE.   |
| AGM-124A  | HUGHES                      | NONE         | 1                   | AF         | ANTI ARMOR AIR-TO-SURFACE MISSILE.   |
| RUM-125A  | BOEING                      | NONE         | 1 EX116 MOD 0       | NAVY       | SHIP LAUNCHED UTILITY MISSILE WITH NUCLEAR DEPTH BOMB PAYLOAD CAPABILITY.  |
| UUM-125A  | BOEING                      | NONE         | 1 EX116 MOD 0       | NAVY       | ANTI SUBMARINE WARFARE STANDOFF WEAPON (ASWSOW) WITH PAYLOAD CAPABILITY FOR ADVANCED LIGHTWEIGHT TORPEDO (ALWT) OR NUCLEAR DEPTH BOMB (NOB). |





MISSILE SERIES (CONTINUED)

| MDS       | MANUFACTURER                    | POPULAR NAME | ENGINE DATA              | DEPARTMENT | DESCRIPTION  |
|-----------|---------------------------------|--------------|--------------------------|------------|--|
| RUM-125B  | BOEING                          | NONE         | 1 EX116 Mod 0            | NAVY       | SHIP LAUNCHED UTILITY MISSILE WITH MK50 TORPEDO PAYLOAD CAPABILITY.  |
| UUM-125B  | BOEING                          | NONE         | 1 EX116 MOD 0            | NAVY       | SUBMARINE LAUNCHED UTILITY MISSILE WITH MK-50 TORPEDO PAYLOAD CAPABILITY.  |
| BGM-126A  | BEECH                           | NONE         | 1 TRI 60-3/097 TURBOJET  | NAVY       | TARGET WHICH PROVIDES A COMPLETE GROUND AND AIR LAUNCHED VARIABLE SPEED TARGET MISSILE SYSTEM.   |
| YBQM-126A | TBO                             | NONE         | 1 TBD (TURBOJECT)        | NAVY       | SUPERSONIC SUBSCALE TARGET WITH SURFACE OR TACTICAL AIRCRAFT LAUNCH CAPABILITY.  |
| YAQM-127A | TBO                             | NONE         | 1 TBD                    | NAVY       | SUPERSONIC LOW ALTITUDE MISSILE TARGET (DRONE).  |
| YAQM-128A | TBD                             | NONE         | 1 TBD                    | NAVY       | AIR-LAUNCHED, NONRECOVERABLE SUPERSONIC SUBSCALE AERIAL TARGET.  |
| AGM-129A  | GENERAL DYNAMICS                | NONE         | 1 F112-WR-100            | AF         | ADVANCED CRUISE MISSILE (ACM).   |
| AGM-129B  | GENERAL DYNAMICS<br>CONVAIR DIV | NONE         | 1 AXIAL FLOW<br>TURBOFAN | AF         | AGM-129A MODIFIED WITH STRUCTURAL AND SOFTWARE CHANGES AND AN ALTERNATE NUCLEAR WARHEAD FOR ACCOMPLISHING A CLASSIFIED CRUISE MISSILE MISSION. |
| AGM-130A  | ROCKWELL                        | NONE         | 1 WPU-9/B                | AF         | ROCKET BOOSTED HARD TARGET ATTACK VERSION OF GBU-15 WEAPON (TV GUIDED).  |
| CATM-130A | ROCKWELL                        | NONE         |                          | AF         | TRAINING VERSION OF AGM-130A DESIGNED FOR CAPTIVE/CARRY FLIGHT.  |

MISSILE SERIES (CONTINUED)

| MDS       | MANUFACTURER       | POPULAR NAME      | ENGINE DATA                  | DEPARTMENT | DESCRIPTION  |
|-----------|--------------------|-------------------|------------------------------|------------|--|
| DATM-130A | ROCKWELL           | NONE              |                              | AF         | TRAINING VERSION OF <b>AGM-130A</b> DESIGNED FOR LANO CREW AND EXPLOSIVE ORDNANCE DISPOSAL TRAINING.   |
| AGM-130B  | ROCKWELL           | NONE              | 1 WPU-9/B                    | AF         | ROCKET <b>BOOSTED</b> HARD TARGET ATTACK VERSION OF <b>GBU-15</b> WEAPON (TV GUIDED).  |
| AGM-130C  | ROCKWELL           | NONE              | 1 WPU-9/B                    | AF         | <b>AGM-130A</b> WITH <b>IMPROVED</b> HARDENED TARGET PENETRATION CAPABILITY.   |
| AGM-131A  | BOEING             | NONE              | NONE                         | AF         | AIR-TO-SURFACE MISSILE CAPABLE OF PENETRATING TARGETS BY USING <b>VARICUS</b> APPROACH TRAJECTORIES AND VELOCITIES ( <b>SRAM II</b> ).   |
| XAGM-131A | TBD                | NONE              | 1 TBO                        | AF         | <b>UNKNOWN</b> - FOR OFFICIAL USE ONLY.  |
| AGM-131B  | BOEING             | NONE              |                              | AF         | TACTICAL VERSION OF THE <b>SRAM II</b> . <b>AGM-131A</b> WILL BE CARRIED ON B-52'S, <b>B-1'S</b> , AND B-2'S. <b>AGM-131B</b> WILL BE CARRIED ON <b>F-15E'S</b> .                    |
| YAIM-132A | GERMANY<br>ENGLAND | NONE              | 1 SOLID FUEL<br>ROCKET MOTOR | AF         | SHORT-RANGE AIR-TO-AIR MISSILE DESIGNED TO BE EFFECTIVE AGAINST A WIDE VARIETY OF TARGETS. MANUFACTURED BY BOOENSEEWERK <b>GERAETETECHNIK</b> INC. & BRITISH AEROSPACE DYNAMICS INC. |
| UGM-133A  | LOCKHEED           | <b>TRIDENT II</b> | 3 SOLID FUEL ROCKET          | NAVY       | TRIDENT 11 MISSILE CAPABLE OF DELIVERING MULTIPLE WARHEADS TO SELECTED TARGET.   |
| XMGM-134A | TBD                | NONE              | 3 TBO                        | AF         | SMALL <b>ICBM</b> THREE <b>SOLID</b> STAGE USING ADVANCED PEACEKEEPER INERTIAL GUIDANCE AND CONTROL SYSTEM.  |





MISSILE SERIES (CONTINUED)

| MOS              | MANUFACTURER             | POPULAR NAME | ENGINE DATA                                | DEPARTMENT     | DESCRIPTION   |
|------------------|--------------------------|--------------|--|----------------|---|
| ASM-135A         | BOEING/<br>LTV AEROSPACE | NONE         | 2 ONE <b>XSR-75-LP-1</b><br>ONE ALTAIR 20B | AF             | AIR-LAUNCHED ANTI SATELLITE MISSILE WITH INFRARED-SEEKING <b>HYPERKINETIC</b> VELOCITY WARHEAD.   |
| <b>CASM-135A</b> | BOEING/<br>LTV AEROSPACE | NONE         | 2 ONE <b>XSR-75-LP-1</b><br>ONE ALTAIR 20B | AF             | CAPTIVE CARRY VERSION OF <b>ASM-135A</b> WITH WARHEAD SIMULATOR AND INERT MOTORS.   |
| <b>AGM-136A</b>  | NORTHROP                 | NONE         |  | AF             | UNMANNED AIR VEHICLE SYSTEM FOR AUTONOMOUS ATTACK OF SELECTED EMITTING SYSTEMS.   |
| ATM-136A         | NORTHROP                 | NONE         |  | AF             | APPEARANCE OF A STANDARD, FULL SIZE <b>AGM-136A</b> , EXCEPT FOR <b>SEE-THRU</b> PANELS FOR PYRO VIEWING LOCATIONS.   |
| OATH-136A        | NORTHROP                 | NONE         |  | AF             | DUMMY <b>AGM-136A</b> USED FOR TRAINING,  |
| <b>BGM-136B</b>  | TBO                      | NONE         |  | AF             | GROUND-LAUNCHED VERSION OF THE <b>AGM-136A</b> .  |
| <b>AGM-137A</b>  | NORTHROP                 | NONE         | 1 F122-WR-100                              | <b>AF/NAVY</b> | <b>LOW-OBSERVABLE</b> STAND-OFF CONVENTIONAL CRUISE MISSILE.  |
| <b>MGM-137B</b>  | NORTHROP                 | NONE         | 1 F122-WR-100                              | ARMY           | GROUND LAUNCHED LOW-OBSERVABLE STAND-OFF CONVENTIONAL CRUISE MISSILE.   |
| <b>YCEM-138A</b> | BOEING                   | NONE         | <b>1</b>                                   | AF             | <b>UNMANNED</b> GROUND-LAUNCHED AUTONOMOUS MINI-DRONE WEAPON PROTOTYPE EQUIPPED WITH A <b>RADAR</b> JAMMING PAYLOAD CAPABLE OF DISRUPTING AIR DEFENSE ACQUISITION RADARS. |
| <b>RTM-139A</b>  | LORAL DEFENSE<br>SYSTEMS | NONE         | 1 MK 114 MOD 0                             | NAVY           | SHIP-LAUNCHED TRAINING MISSILE FOR THE RUM-139A,  |
| RUM-139A         | LORAL<br>SYSTEMS GROUP   | NONE         | 1 <b>EX-114</b> MOD 0                      | NAVY           | ALL WEATHER, QUICK REACTION ANTISUBMARINE WARFARE MISSILE DESIGNED TO BE VERTICALLY LAUNCHED FROM SURFACE SHIPS.  |

MISSILE SERIES (CONTINUED)

| MDS       | MANUFACTURER                   | POPULAR NAME | ENGINE DATA                       | DEPARTMENT | DESCRIPTION  |
|-----------|--------------------------------|--------------|-----------------------------------|------------|--|
| DRUM-139A | LORAL DEFENSE SYSTEMS          | NONE         | 1 MK-114 MOD O                    | NAVY       | DUMMY MISSILE USED TO PROVIDE HANDS-ON LABORATORY TRAINING FOR THE RUM-139A.                                       |
| MGM-140A  | USAMI COM                      | NONE         |                                   | ARMY       | MOBILE LAUNCHED GROUND ATTACK MISSILE WITH INERTIAL GUIDANCE SYSTEM.   |
| MGM-140B  | LORAL/VOUGHT                   |              | 1 M-124                           |            | MGM-140A MODIFIED FOR SELF GUIDANCE USING A GPS NAVIGATION SYSTEM, DISPENSES BOMBLETS AT A PREDETERMINED LOCATION. |
| ADM-141A  | BRUNSWICK DEFENSE CORP         | NONE         |                                   | NAVY       | AIR LAUNCHED DECOY WITH PASSIVE RADAR REFLECTOR USED TO CREATE A FALSE RADAR IMAGE.                                |
| ADM-141B  | BRUNSWICK DEFENSE CORP         | NONE         |                                   | NAVY       | AIR LAUNCHED DECOY WHICH DISPENSES CHAFF TO CREATE A FALSE RADAR IMAGE.  |
| ADM-141C  | BRUNSWICK/<br>ISRAELI MILITARY |              | 1 TELEDYNE CAE 312<br>GAS TURBINE | NAVY       | ADM-141A MODIFIED WITH TURBOJET PROPULSION AND GROUND CLEARANCE CAPABILITY.  |
| AGM-142A  | RAFAEL                         | NONE         | 1                                 | AF         | ROCKET POWERED AIR-TO-SURFACE GUIDED MISSILE INTENDED TO ATTACK FIXED/MOBILE, HIGH VALUE SOFT TARGETS (HAVE NAP).  |
| ATM-142A  | RAFAEL                         | NONE         |                                   | AF         | TRAINING VERSION OF AGM-142A (HAVE NAP).   |
| CATM-142A | RAFAEL                         | NONE         |                                   | AF         | TRAINING VERSION OF THE AGM-142A, DESIGNED FOR CAPTIVE CARRY (HAVE NAP).   |
| OATH-142A | RAFAEL                         | NONE         |                                   | AF         | DUMMY VERSION OF AGM-142A USED FOR GROUND MAINTENANCE TRAINING (HAVE NAP).   |





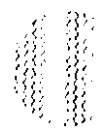


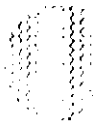
MISSILE SERIES (CONTINUED)

| MDS       | MANUFACTURER                        | POPULAR NAME | ENGINE DATA                       | DEPARTMENT | DESCRIPTION  |
|-----------|-------------------------------------|--------------|-----------------------------------|------------|--|
| AGM-142B  | RAFAEL                              | NONE         | 1 WPU-14/B                        | AF         | AGM-142A EQUIPPED WITH IIR SEEKER AND BLAST/FRAGMENTATION WARHEAD (HAVE NAP).  |
| AGM-142C  | RAFAEL                              | NONE         | 1 WPU-14/B                        | AF         | AGM-142A EQUIPPED WITH TV SEEKER AND PENETRATOR WARHEAD (HAVE NAP).  |
| AGM-142D  | RAFAEL                              | NONE         | 1 WPU-14/B                        | AF         | AGM-142A EQUIPPED WITH IIR SEEKER AND PENETRATOR WARHEAD (HAVE NAP).   |
| MQM-143A  | USAMICOM                            | NONE         |                                   | ARMY       | ONE-FIFTH SCALE DRONE OF A SOVIET MIG-27.  |
| BQM-145A  | TELEDYNE RYAN                       | PEREGRINE    | 1 CAE 382-10                      | AF/NAVY    | RECONNAISSANCE DRONE CAPABLE OF FLYING PREPROGRAMMED OR DYNAMIC MISSION PROFILES UP TO 350 NAUTICAL MILES FROM LAUNCH POINT. |
| MI M-146A | MARTIN MARIETTA                     | NONE         |                                   | ARMY       | SUPERSONIC, LASER BEAM RIDER MISSILE USED TO ATTACK LOW-FLYING FIXED WING, AND UNMANNED AIRBORNE VEHICLES.                   |
| DMTM-146A | MARTIN MARIETTA                     | NONE         |                                   | ARMY       | DUMMY TRAINING VERSION OF MI M-146A.   |
| BQM-147A  | RPV INDUSTRIES                      | NONE         | 1 5.8 CU IN. SACHS DOLMER 2 CYCLE | NAVY/MAR   | REMOTELY/AUTOMATICALLY PILOTED VEHICLE CAPABLE OF SPEEDS OF 48-100 MILES PER HOUR WHILE CARRYING A 25 POUND PAY LOAD.        |
| FGM-148A  | TEXAS INSTRUMENT<br>MARTIN MARIETTA | NONE         | 1 ROCKET MOTOR                    | ARMY       | MANPORTABLE ANTITANK WEAPON SYSTEM.  |
| YPQM-149A | TBO                                 | TBO          | TBO                               | ARMY/NAVY  | UNMANNED SHORT RANGE VEHICLE USED FOR RECONNAISSANCE, SURVEILLANCE, TARGET ACQUISITION.                                      |

MISSILE SERIES (CONTINUED)

| MDS        | MANUFACTURER     | POPULAR NAME | ENGINE DATA                  | DEPARTMENT | DESCRIPTION   |
|------------|------------------|--------------|------------------------------|------------|---|
| YPQM- 150A | TBD              | TBD          | TBD                          | ARMY/NAVY  | UNMANNED SHORT RANGE VEHICLE USED FOR RECONNAISSANCE, SURVEILLANCE, TARGET ACQUISITION.   |
| FQM-151A   | AERO VIRONMENT   | NONE         | 1 300 WATT<br>ELECTRIC MOTOR | NAVY/MAR   | INDIVIDUALLY-LAUNCHED ORONE USED FOR RECONNAISSANCE AND TARGET ACQUISITION. ELECTRICALLY POWERED AIR VEHICLE CONSTRUCTED OF COMPOSITE MATERIALS.  |
| YAIM-152A  | TBD              | NONE         | TBD                          | NAVY       | HIGH ENERGY AIR- LAUNCHED PROTOTYPE MISSILE USED FOR INTERDICTION.  |
| AGM- 154A  | TEXAS INSTRUMENT | TBD          |                              | AF/NAV/MA  | JOINT STANDOFF WEAPON (JSOW). AIR-TO-GROUND WEAPON DESIGNED TO ATTACK A VARIETY OF TARGETS DURING DAY, NIGHT, OR ADVERSE WEATHER CONDITIONS.  |
| AGM-154B   | TEXAS INSTRUMENT | TBD          |                              | NAV/AF/MA  | JSOW VARIANT WITH GUIDANCE SYSTEM, BLU-108/B DISPENSE SYSTEM, DEPLOYABLE WINGS, CONTROLLABLE AND FIXED FINS, AND AN ALL-UP-AROUND PRIMARY COMPUTER.   |
| AGM-154C   | TEXAS INSTRUMENT | TBD          |                              | NAVY/MAR   | JSOW VARIANT WITH GUIDANCE SYSTEM, SEEKER, UNITARY WARHEAD, MAN-IN-THE-LOOP DATA LINK, DEPLOYABLE WINGS, CONTROLLABLE AND FIXED FINS, AND AN ALL-UP-AROUND PRIMARY COMPUTER. NOT A DISPENSER. |
| BQM- 155A  | TRW/ IAI         | NONE         | 2 MOTO GUZZI V75             | ARMY   MAR | UNMANNED AIR VEHICLE USED FOR RECONNAISSANCE, SURVEILLANCE, TARGET ACQUISITION TO 150 KILOMETERS BEYOND FORWARD LINE OF GUN TROOPS.   |
| RI M-156A  | RAYTHEON/HUGHES  | NONE         | 1                            | NAVY       | VERTICALLY LAUNCHED SURFACE-TO-AIR AND SURFACE-TO-SURFACE GUIDED MISSILE. MID-COURSE COMMAND GUIDANCE AND TERMINAL ACTIVE OR PASSIVE HOMING.  |





MISSILE SERIES (CONTINUED)

| MDS      | MANUFACTURER | POPULAR NAME | ENGINE DATA | DEPARTMENT | DESCRIPTION  |
|----------|--------------|--------------|-------------|------------|--|
| YMG-157A | TBD          | NONE         | TBD         | ARMY       | TACTICAL MISSILE UTILIZING A FIBER OPTIC DATA LINK TO ENGAGE AND DEFEAT HIGH VALUE GROUND TARGETS. |

PROBE SERIES

| MDS            | MANUFACTURER           | POPULAR NAME | ENGINE DATA                      | DEPARTMENT | DESCRIPTION   |
|----------------|------------------------|--------------|----------------------------------|------------|---|
| PWN-8B         | SPACE DATA CORPORATION | NONE         | 1 SR-71-AD-1                     | AF         | ROCKET BORNE SYSTEM TO CARRY METEOROLOGICAL SOUNDING INSTRUMENTS ALOFT.   |
| PWN-10A        | SPACE DATA CORPORATION | NONE         | 1 SR-110-A0-1                    | AF         | ROCKETBORNE METEOROLOGICAL SOUNDING SYSTEM, CARRIES TRANSPONDER <b>SOUNDING</b> INSTRUMENT TO 240,000 FT WHICH TRANSMITS ATMOSPHERIC DATA WHILE RETURNING TO EARTH BY PARACHUTE.                      |
| FWN-10B        | SPACE DATA CORPORATION | NONE         | 1 SR-110-AD-1                    | AF         | <b>MODIFIED</b> PWN-10A. RANGING RECEIVER NOT INCLUDED IN TELEMETRY PAY LOAO.   |
| <b>PWN-11A</b> | SPACE DATA CORPORATION | NONE         | 1 SR-110-AD-1                    | AF         | ROCKETBORNE SYSTEM USED TO CARRY ATMOSPHERIC <b>STUDY</b> INSTRUMENTS TO 240,000 FT. INSTRUMENT TRANSMITS ATMOSPHERIC DATA WHILE RETURNING TO EARTH BY PARACHUTE.                                     |
| <b>PWN-12A</b> | SPACE DATA CORPORATION | NON E        | 1 SR-110-AD-1<br>AERO OYNE CORP. | AF         | ROCKETBORNE METEOROLOGICAL SOUNDING SYSTEM USED TO CARRY BALLON RAOAR TARGET ML-568/AM TO 300,000 FT. PAYLOAO INFLATES, DESCENDS, ANO IS TRACKED BY RADAR TO <b>PROVIDE</b> ATMOSPHERIC DENSITY DATA. |





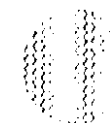
ROCKET SERIES

| MDS     | MANUFACTURER            | POPULAR NAME | ENGINE DATA                        | DEPARTMENT | DESCRIPTION   |
|---------|-------------------------|--------------|------------------------------------|------------|---|
| MGR-1 A | EMERSON/<br>DOUGLAS     | HONEST JOHN  |                                    | ARMY       | FREE FLIGHT, <b>SOLID</b> PROPELLANT, FIELD ARTILLERY ROCKET (762 MM) .             |
| MGR-1 B | MCOONN EL L<br>DOUGLAS  | HONEST JOHN  |                                    | ARMY       | UPGRADED <b>MGR-1 A</b> .   |
| ATR-2A  | MCDONNELL<br>DOUGLAS    | GENIE        |                                    | AF         | NONE.   |
| AIR-2B  | MCOONNELL<br>DOUGLAS    | GENIE        | 1 <b>SR-49-TC-1</b>                | AF         | UNGUIDED AIR-TO-AIR ROCKET DETONATED BY LAUNCHING AIRCRAFT.                         |
| RUR-4A  | TBO                     | WEAPON ALPHA |                                    | NAVY       | NONE .  |
| RUR-5A  | TBD                     | ASROC        |                                    | NAVY       | NONE.   |
| RUR-5B  | MULTI -<br>MANUFACTURER | ASROC        | 1 SOLID PROPELLANT<br>GRAIN        | NAVY       | <b>MODIFIED RUR-5.</b>  |
| RUR-5C  | MULTI -<br>MANUFACTURER | ASROC        | 1 SOLID PROPELLANT<br>GRAIN        | NAVY       | <b>MODIFIED RUR-5.</b>  |
| RUR-5D  | MULTI -<br>MANUFACTURER | ASROC        | 1 SOLID PROPELLANT<br>GRAIN        | NAVY       | MODIFIED <b>RUR-5.</b>  |
| RUR-5E  | MULTI -<br>MANUFACTURER | ASROC        | 1 <b>SOLID</b> PROPELLANT<br>GRAIN | NAVY       | MODIFIED <b>RUR-5.</b>  |
| RUR-5F  | MULTI -<br>MANUFACTURER | ASROC        | 1 SOLID PROPELLANT<br>GRAIN        | NAVY       | <b>RUR-5A</b> MODIFIED TO UTILIZE NEW SAFETY DEVICES AND SHIELDED CABLE ASSEMBLIES. |

ROCKET SERIES (CONTINUED)

| MDS                  | MANUFACTURER               | POPULAR NAME          | ENGINE DATA  | DEPARTMENT | DESCRIPTION  |
|----------------------|----------------------------|-----------------------|--------------|------------|--|
| ADR-8A               | REVERE COPPER<br>AND BRASS | NONE                  |              | AF         | NONE.  |
| <del>XAGR- 14A</del> | TBD                        | ZAP                   |              | NAVY       | NONE.  |
| <del>MTR- 15A</del>  | <del>USAMI COM</del>       | NONE                  | 3 MK40 MOD 3 | ARMY       | TARGET ROCKET VEHICLE FOR TRAINING IN DEFENSE AGAINST<br>AIRCRAFT/MISSILE ATTACK.  |
| <del>MQR- 16A</del>  | TBD                        | NONE                  |              | NAVY       | AERIAL TARGET WITH INFRARED AUGMENTATION THAT SIMULATES<br>REOEYE BALLISTIC FLIGHT PROFILE.  |
| XFGR-17A             | GENERAL<br>DYNAMICS        | VIPER                 | 1 5774669    | ARMY       | PORTABLE, SHOULDER FIRED, UNGUIDED ROCKET USED AS LIGHT<br>TANK WEAPONS .  |
| <del>DGTR- 18A</del> | NAVAL ORDNANCE<br>STATION  | <del>SMOKEY SAM</del> |              | NAVY       | INERT TRAINING ROCKET USED AS SUBSTITUTE FOR LIVE ROCKET<br><del>UNITS</del> DURING MAINTENANCE <del>AND</del> OPERATIONAL TRAINING. |





SATELLITE SERIES

| MDS    | MANUFACTURER     | POPULAR NAME | ENGINE DATA | DEPARTMENT | DESCRIPTION   |
|--------|------------------|--------------|-------------|------------|---|
| WS-1 A | GENERAL ELECTRIC | DMSP SD-2    |             | DOD        | METEOROLOGICAL SATELLITE.   |
| WS-1 B | GENERAL ELECTRIC | DMSP 50-3    |             | 000        | MODIFIED WS-1A.   |
| WS-2A  | TBD              | DMSP 6       |             | 000        | 4METEOROLOGICAL SATELLITE.  |
| LS-3A  | TRW/AESC         | OSP          |             | DOD        | DEFENSE SUPPORT SYSTEM SATELLITE.   |
| LS-3B  | TRW/AESC         | DSP-1        |             | DOD        | MODIFIED LS-3A.   |
| ES-4A  | TRW              | DSCS II      |             | DOD        | DEFENSE SATELLITE COMMUNICATION SYSTEM (DSCS II), COMMUNICATION SATELLITE USED FOR C3.  |
| ES-5A  | GENERAL ELECTRIC | DSCS III     |             | DOD        | DEFENSE SATELLITE COMMUNICATION SYSTEM (DSCS III), COMMUNICATION SATELLITE USED FOR C3. |
| LS-6A  | TBD              | BSTS         |             | DOD        | BOOST SURVEILLANCE AND TRACKING SYSTEM SATELLITE.                                       |
| NS-7A  | ROCKWELL         | GPS I        |             | 000        | NAVSTAR GLOBAL POSITIONING SYSTEM SATELLITE USED FOR NAVIGATION.                        |
| NS-7B  | ROCKWELL         | GPS 11       |             | 000        | MODIFIED NS-7A.   |
| NS-7C  | ROCKWELL         | GPS 11A      |             | DOD        | MODIFIED NS-7B.   |
| NS-7D  | ROCKWELL         | GPS IIR      |             | DOD        | MODIFIED NS-7C.   |

SATELLITE SERIES (CONTINUED)

| MDS   | MANUFACTURER | POPULAR NAME | ENGINE DATA | DEPARTMENT | DESCRIPTION                           |
|-------|--------------|--------------|-------------|------------|---------------------------------------|
| Es-8A | LOCKHEED     | MI LSTAR     |             | DOD        | COMMUNICATIONS SATELLITE USED FOR C3. |